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ABSTRACT

The Active Student Participation Program (ASPP), developed by the Department of Counseling and Personnel Services in the University of Maryland College of Education, was designed to disseminate knowledge of behavior modification principles. The course has been taught since the fall of 1971, and approximately 81 in-service teachers have completed it. The course presents didactic material on behavior modification. The four areas of behavior modification case material are directed towards teachers of preschool children, teachers in the public schools, teachers in training, and evaluation of behavior modification programs. (Appendixes of related material follow each case material section when necessary.) (MJM)

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"Behavior Modification for Teachers"

submitted to

American Association of Colleges  
for Teacher Education

by

The School Psychology Program  
University of Maryland

November, 1972

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ABSTRACT OF THE PROGRAM

### Behavior Modification for Teachers

In 1969, in the Department of Counseling and Personnel Services in the College of Education, the School Psychology Specialty Area came under the direction of Dr. Donald K. Pumroy. Shortly after, it was decided that one of its primary missions would be to disseminate knowledge of behavior modification principles to both pre-service and in-service teachers. This goal was deemed as sufficiently important to establish a program with this function in mind.

The main thrust of the program has been carried out in the course called the Active Student Participation Program (A.S.P.P.). This course has been taught since the fall of 1971 and approximately 81 in-service teachers have completed it. This course presents the didactic material on behavior modification. The teacher also applies the behavioral principles in her class. While the course is probably the most important aspect of the program, there have been, and are, a variety of other ways in which behavior modification principles are taught to both prospective and in-service teachers (i.e. workshops, presentations, and consultations). For each of these efforts, the goal is the same: to familiarize teachers with behavior modification principles. The content of each presentation is also the same, varying only in the amount of knowledge that is communicated.

The program has been well received by the participants. Teachers report that they are better able to reduce inattentive and disruptive behaviors of the children and, thus, better help children learn the appropriate social skills and academic material.

Budgetary support for this program is modest, consisting of one professional position (Dr. Pumroy) and one graduate assistant. Much of the in-service education was conducted by Dr. Pumroy and his advanced graduate students without specific financial support from the Department or College.

## CASE MATERIAL CONTENTS

### Preface

### Section

- 1.1.0 Behavior Modification taught  
to teachers of preschool children.
- 2.1.0 Behavior Modification taught  
to teachers in the Public Schools.
- 3.1.0 Behavior Modification taught  
to teachers in training.
- 4.1.0 Evaluation of Behavior Modification  
Programs.

## PREFACE

The case material is presented in four section. The first section presents the teaching of behavior modification to teachers of preschool children. The overview of the work done is followed by an appendix which presents annual reports, a research project and a proposal for a Headstart project. The second section concerns the work done with teachers in the public schools. Again, an overview of what has been done and planned is presented and followed by appropriate documents in the appendix. The third section is about the work done with prospective teachers and is followed with a report on such an effort. The fourth, and last section, presents the material on the evaluation of the program of teaching behavior modification to teachers.

SECTION 1.1.0

Behavior Modification taught  
to teachers of preschool children.

## Section 1.1.0

### Behavior Modification Taught to Teachers of Preschool Children

Over the last few decades more and more emphasis has been placed on the learning of preschool children. Knowledge from the psychological laboratories has pointed up the importance of earlier learning and this importance has been reflected in various projects such as the Head Start Program. One outstanding value of working with children at this level is that they have had little time to practice undesirable behavior and, consequently, the application of behavior modification principles can modify behavior in a relatively short period of time. By modifying the behavior of the child at this early age, there is a reduced likelihood that the behavior will persist and, eventually, be a more serious and a more deeply ingrained problem.

The interaction with those in the School Psychology Program and preschool teachers has taken place in a variety of situations. The activities are divided into three areas: Work that took place in the past (i.e. before July 1972), work currently underway for the Fall semester 1972, and plans for the future.

#### 1.2 WORK DONE IN THE PAST

##### 1.2.1 Maryland Council of Participating Parents, Nursery Schools, Inc.

For three years (1969-70, 1970-71, 1971-72) those in the School Psychology Program have worked with the teachers presenting principles of behavior modification. The usual procedure was to meet with the teachers monthly for more didactic presentations, while individuals would visit the individual school to help teach the principles in an applied setting.

The number of teachers that took part each year was as follows: 1969-70, 15 ;

Section 1.

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1970-71, 12 ; 1971-72, 10 . Annual reports for each year are included at the end of this section. Also included is an article on "response cost" that was developed while working with one of the teachers.

1.2.2 Maryland 4 C's (Community Centered Child Care) Committee.

The School Psychology Program has been represented on the Advisory Council and on the Research Committee. At the annual meeting, held in the Spring of 1972, a presentation was made on the application of behavior modification principles applied to preschool children. Approximately 120 were in attendance.

1.2.3 Annual meeting of the Maryland Council for Participating Parents Nursery Schools

This meeting, held in the spring of 1972, had a workshop presented by representatives in the School Psychology Program. The presentation consisted of a lecture on the application of behavior modification principles followed by question and answer period. There were approximately 15 teachers and 15 parents in attendance.

1.2.4 PTA Presentations

As the teachers must, and should, be responsive to the parents of the children in the school, it seemed most important that the parents have some exposure to the behavioral approach. In this way questions or problems that might arise for the teacher in dealing with parents about behavior modification can be reduced because the parent has some sophistication. Consequently, School Psychology personnel have given PTA talks on behavior modification. These talks to nursery school PTA's

have been given during the academic years by School Psychology personnel and many of these presentations have been arranged by the University Speaker's Bureau.

#### 1.3.0 WORK CURRENTLY UNDERWAY IN THE FALL 1972

##### 1.3.1 Maryland Council of Participating Parents Nursery School, Inc.

This program will continue as it has in the past. School Psychology personnel will meet monthly with the teachers and also will visit the individual schools to work with the teachers. As some of the teachers have become fairly knowledgeable about the behavioral principles they will be involved in the teaching of the new teachers.

##### 1.3.2 Child Care Center, Inc.

This is a nursery school in Rockville, Maryland. The School Psychology Program is represented on the Board of Directors and plans are underway to help the Board first, and then the teachers, to understand the principles of behavior modification.

##### 1.3.3 Maryland 4 C's (Community Centered Child Care) Committee

The School Psychology Program continues to be represented on the Advisory Board and the Research Committee. When appropriate, in problems that arise in these committee meetings, the behavioral approach is presented and explained.

#### 1.4 FUTURE PLANS

##### 1.4.1 Head Start Program

Approval has been requested by the regional psychologist for working with the teachers of the Head Start Program in Annapolis, Maryland. Such a proposal has been developed and submitted for review. Its main focus is on conducting a behavior modification workshop for the teachers followed by regular consultation. A copy of the proposal is included at the end of this section.

1.4.2 Maryland 4 C's (Community Centered Child Care) Committee

Plans are underway to prepare a workshop on behavior modification for the teachers in Day Care Centers and nursery schools. This workshop is to be carefully programmed with detailed written material and slide presentation. By having the program carefully detailed it can be presented by individuals who have had less experience in presenting a workshop. It also has the advantage of revealing flaws in the program so that they can be eliminated in future presentations.

APPENDIX FOR SECTION 1.0

Behavior Modification taught to teachers  
of preschool children.

- 1.5.1 Annual Report for the Psychological Services  
Program for the Maryland Council of Participating  
Parents Nursery Schools, Inc. for 1969-70.
- 1.5.2 Annual Report for the Psychological Services  
Program for the Maryland Council of Participating  
Parents Nursery School. 1970-72
- 1.5.3 Annual Report for the Psychological Services  
Program for the Maryland Council of Participating  
Parents Nursery Schools, Inc. for 1971-72.
- 1.5.4 A response-cost technique: good economics in the  
control of disruptive behavior by Charles Kerns.
- 1.5.5 Proposal for Consultation with Annapolis  
Headstart Program.

Annual Report for the Psychological Services Program for The  
Maryland Council of Participating Parents Nursery Schools Inc. for 1969-70

Donald K. Pumroy

Since the mid fifties psychological services have been provided for the teacher of the children of the nursery schools in the council. The aim has been to have a psychologist consult with the teachers about problems they face with the children. Obviously, over time, different psychologists have been hired and each has presented his own orientation. In the past two different psychologists have been employed at the same time. One who was responsible for an afternoon seminar plus three visits to each school subscribing.

The second psychologist held a meeting in the evening on a monthly basis with the teachers to discuss problem cases. During 1969-70 the psychological services program was conducted in a somewhat different manner. Dr. Donald Pumroy from the University of Maryland conducted both the afternoon and evening sessions while the visits to the school were made by his students. The approach was also a different one from the past, as the approach presented has been a behavioral one.

During the academic year seminars were conducted by Dr. Pumroy around the first Wednesday of each month (Oct., Nov., Dec., Jan., Feb., March, April). One presentation was made in the afternoon at the Rockville Presbyterian Church and one in the evening at the Northwood Presbyterian Church. The students paid a total of 187 visits to the schools. Thus each received an average of 9.3 visits per year. Some of the schools had more visits than the other school for several reasons. One would be the students assigned to that school had trouble scheduling appointments because of conflict such as University classes. Secondly, some of the teachers stated that they have few or no problem about which they were concerned and consequently the student felt not needed. These students usually then tended to spend more time at another school to which they had been assigned where the teachers expressed concern about some of the children.

The behavioral view was presented in lecture to the teachers and the students\* than used this same approach in working with the teachers in the schools. The gist of the behavioral approach states that any problem the teacher faces can be viewed in terms of the school's behavior. Thus the child who is shy exhibits behavior of playing by himself, not talking to others and so on. The aggressive child shows behavior of hitting pushing, shoving, etc. Even toilet training can be analysed as certain behaviors that should take place in a certain location at a particular time. Once the problem is viewed behaviorally the next step is to use some of the learning techniques to change the frequency of the behaviors, either to increase or decrease them. Thus with the shy child described earlier, he should decrease the behaviors of playing alone and increase the behaviors of talking to others. The other examples could be viewed in the same way. Several other useful learning principles were presented in the lectures and demonstrated by the students in the classes. Some of these problems were:

1. Helping the teacher with the problem of getting her four year old class to start putting on their coats and be ready to join their car pool groups at the close of school each day.

2. Helping the teacher achieve more quiet during rest time so that those children who wanted to could listen to the story records that were played.

3. Helping a child who isolated himself during story time to participate more in the group and interact more with the other children.

4. Suggesting methods of toilet training to a mother of a 3 year old who was having problems at home.

5. Helping a teacher work with a shy girl who did not speak and rarely participated in activities.

6. Working with a teacher who had a boy in her class who would spend all of his free time dressing up in woman's clothes.

7. Helping a teacher change the behavior of a boy who was frequently hitting and pushing the other children.

8. Helping a teacher work with a 3 year old boy in his adjustment to nursery school. Initially he would not stay unless his mother stayed and if she left he would throw a temper tantrum.

9. Helping a teacher concerned about a little girl who would pay attention to a particular task for only a short period.

The point stressed throughout the year was the teachers were in the best position to define problems the children displayed and it was the psychologist role to help to solve the problems the teachers observed.

Evaluation of the program: As with any program there should be some evaluation in order to assess its effectiveness. For a variety of reasons a carefully designed thorough evaluation was done. However, a questionnaire asking for the anonymous comments from all the teachers involved was distributed to them. The teachers who attended the last session completed the questionnaire at that time. For the rest of the teachers a questionnaire was sent to the director of the schools along with a return address and stamped envelope. Of the schools involved 15 teachers responded. Each teacher was asked to rate the helpfulness of the program on a five point scale. Three of the points were labelled: 1 not at all helpful, 3 somewhat helpful, 5 very helpful. The other two points (2 and 4) while not labelled reflected the helpfulness of the program rated between 1 and 3 or 3 and 5. The number of teachers responding at each of these levels was:

|                    |   | Number of teachers responding |       |
|--------------------|---|-------------------------------|-------|
| not at all helpful | 1 | 0                             |       |
|                    | 2 | 1                             |       |
| somewhat helpful   | 3 | 3                             |       |
|                    | 4 | 6                             |       |
| very helpful       | 5 | 5                             |       |
|                    |   | 15                            | total |

Thus most of the teachers viewed it as helpful in their work with the children. The average rating (mean) would be at the 4 level. The teachers were asked to comment on the program in terms, some of the comments were:

"I changed my attitude and approach to a large extent with regard to discipline both in the classroom and at home."

"A little more opportunity to do some research in the classroom."

"I find the individual help I've been getting in the classroom most valuable."

"Would prefer to have direct contact with psychologist for school visits."

"More discussion pertinent to problems that may lead to educational problems later on."

"I have tried to apply much of the ideas on 'changing behavior' -it has given me more tactics to use."

"This has been a totally new approach for controlling behavior. It has required a complete shift in my thinking and understanding of how to deal with problems. I continue to feel that behavior is caused and that cause should be dealt with also."

Problems involved in the program: As this was the first year of a somewhat different approach and procedure naturally there were some problems:

- A. Misunderstanding about the number of visits to be paid to the school by the students. The contract called for three visits per school but it later became evident that some schools had many more children than others and consequently wanted more visits.
- B. Some teachers probably because of their previous experience, felt that the psychologist should "spot" the problem children and point them out to the teacher. Our view was that the teacher had much more contact with the children and would be in a much better position to detect problems than a psychologist who was only making a few visits to the school.
- C. Some teachers thought the psychologists should use various diagnostic tests to evaluate the children and then prepare a report for the teacher.
- D. Some teachers probably because of the conflict between the new behavioral approach and their approach (frequently a need theory approach) preferred not to learn the behavioral approach, or to apply any behavioral techniques in their classes. On the other hand some of the teachers (what appears to be a majority judging from the evaluation questionnaires) were able to understand, use and appreciate the behavioral approach.
- E. Perhaps related to the above is the point some of the teachers were

not able to attend all of the seminars. As the material discussed in the seminars were cumulative some of the teachers missed part of the material. In some cases a review was presented but this caused some dissatisfaction among those who had already learned the material.

- F. While the role of the psychologist was to work with the teachers in their dealing with the children it later became apparent that the teachers wanted to talk about their interactions with the parents. This was not covered during the year.

Plans for '70-'71: From the experiences learned during the past year certain changes and new projects will be pursued:

1. Now that some of the teachers are familiar with the program they can be used to help explain the approach to others. The teachers are in a good position to help with the teaching of the approach because they understand the problems that arise in the nursery schools.
2. Some better procedure should be worked out to evaluate the program and how it might be improved.
3. A focus should be placed on keeping the teacher interaction with the parents so that maximum benefits may be made available to the child.
4. A greater emphasis on more positive behavior of the child. For the most part during '69-'70 the focus was on disruptive deviant behaviors. Some examples of more positive behavior would be development of motor skills, learning how to interact with other children, development of verbal skills, learning some of the basic behavior that are a forerunner of reading skills.
5. During the year some parents asked about help with their children's problems. Little time was available so little work was done. Next year how some work might be done with interested parents might be explored.

Overall it has been a challenging and stimulating task to provide psychological services for the nursery school. I share with my students when I say I hope children, teachers, and parents have benefitted. It has been a worthwhile experience for us and we feel we've learned a great deal.

\* The University of Maryland students that participated in the program were:

Gail Bradbard  
Cheryl Burg  
Barb Butcher  
Lessa Chais  
Phylis Cohen  
Betsy Cunningham  
Mary Ann Dubner  
Irene Friendly  
Sue Garner  
Bruce Hutchison  
John Libert  
Jackie Little  
Honey Loring  
Isadora Mayer  
Ronnie Mazeika  
Marilyn McGilvrey  
Juanita Stiles  
Elaine Venetta  
Margaret Vogel  
Sharon Wallace  
Jill Weiss

Their effort has been much appreciated. Special thanks are due to Marilyn McGilvrey for her work in coordinating the program.

## ANNUAL REPORT (1970-71)

Psychological Services Program for  
the Maryland Council of Participating Parents  
Nursery School

Donald K. Pumroy  
University of Maryland

This is the second year that Dr. Pumroy and his students\* in The School Psychology Program at the University of Maryland have been responsible for the Psychological Service Program. During this period Dr. Pumroy met with the teachers on the first Wednesday of each month (Oct., Nov., Dec., Jan., Feb., Mar., Apr.). One presentation was made in the afternoon at the Rockville Presbyterian Church and one in the evening at the Northwood Presbyterian Church. The students were assigned to the various participating school; their function there was to work with specific problems that were of concern to the teachers. Some of the teachers felt they had problems they wanted to work on with the students; they had more contacts with the students. On the other hand some of the teachers had few or no problems and they had fewer visits.

As was true last year the behavioral approach was used through the sessions and with the students interaction with the teachers. The behavioral approach views problems as the child showing undesirable behavior or failing to show desired behavior. The aim of the approach is to help the teacher reduce or eliminate undesirable behavior (e.g. hitting, throwing blocks) in the children or helping the children with new behaviors (e.g. talking, standing in line). Some of the behaviors mentioned by teachers they worked on were:

1. "One little boy frequently kicks over a block building that another child has constructed."
2. "He has no attention span at all, flirts from thing to thing, uses no toy longer than one minute or less"
3. "One child does not like to feel things with his hands such as water, finger paint, etc."
4. "Getting up and being silly during circle time"
5. "Ability to communicate verbally"
6. "A child who sits, will not join in any activity, is easily reduced to tears and does not communicate with other children or teachers."

\* The students that participated in the program were: Belisairo Andrade, Ida Sue Baron, Mike Boyle, Sue Garner, Stephanie Jordan, Caroline Keedy, Charles Kerns, Louis Lewin, Leon Litow, Rolf Mielzarek, Tammy Plitt, Jacob Roth, Marion Salvagno, Margaret Vogel, Jill Weiss, Diane Wilson, Nelson Zahler. Marilyn McGilvrey served as coordinator for the program.

(OVER)

| <u>Areas</u>       | <u>Least<br/>Experience</u><br>N=10 | <u>Middle<br/>Experience</u><br>N=9 | <u>Most<br/>Experience</u><br>N=9 | <u>TOTAL<br/>for<br/>Group<br/>N=28</u> |
|--------------------|-------------------------------------|-------------------------------------|-----------------------------------|-----------------------------------------|
| 1. Creativity      | 1.00                                | 1.78                                | 1.78                              | 1.57                                    |
| Verbal Development | 2.90                                | 2.67                                | 3.11                              | 2.89                                    |
| Basic Behaviors    | 1.80                                | 1.67                                | 2.33                              | 1.93                                    |
| Social Interaction | 1.40                                | 1.11                                | 1.11                              | 1.21                                    |
| Motor Skills       | 1.60                                | 2.22                                | 1.67                              | 1.82                                    |
| Paying Attention   | 1.60                                | 1.78                                | 2.00                              | 1.79                                    |

Thus, the teachers as a group rate Social Interaction as most important followed by Creativity. Verbal Development is rated as least important. Some variation is noted in contrasting the different groups.

Evaluation= In order to evaluate the program a questionnaire was designed for such a purpose. On the day of the last session the teacher in attendance (N=12) were asked to complete the questionnaire anonymously. They were asked to rate the helpfulness of the program on a five point scale. The points on the scale and the number of teachers responding were as follows:

|                    |   | Number of Teachers<br>Responding |
|--------------------|---|----------------------------------|
| Not at all helpful | 1 | 0                                |
|                    | 2 | 0                                |
| Somewhat helpful   | 3 | 1                                |
|                    | 4 | 3                                |
| Very helpful       | 5 | 8                                |
|                    |   | <u>12</u>                        |
|                    |   | Total                            |

Thus, most of the teachers responding rated the program "very helpful". The average rating (mean) was 4.58 or almost in the middle between 4 and 5. All of the teachers said that they had used the behavioral approach in their work and seven said that their thinking about children had changed. Some of the problems worked on were: "excessive crying", "girl kicking and biting", "noisy rest period", "helping a child talk", "child who always wanted to go home", "child who said his clothes were too tight", "helping me move children from one activity to another." Several teachers said that they liked the approach because it focussed on the positive behavior of the children and "it works". Also it was mentioned that the behavioral view tells the teacher in a clear way what she should do if she is concerned about some problem. Others pointed out how the other teachers (maybe those who had taken the program before) suggestions were good, "I am now ready to do some constructive parent educ.", "the program alerted me to isolate goals and aims," it would be good to have a "hand out describing approach and an outline of the sessions, "I think I understood the children in my class better this year than ever before due to closer observation."

7. "Dependence on mother"
8. "Hitting or shoving instead of talking."
9. "Independence - most of the children require too much help with clothes, etc."
10. "Inability to take turns and share"
11. "Whining - temper tantrums"
12. "Security and self confidence with a new activity"

It was stressed throughout the interaction that the teacher was in the best position to decide whether some behavior (or lack of it) was a problem and the role of the psychologist was to help the teacher resolve the problems.

Some of the parents heard about the program from the teachers and attended some of the sessions. Also Dr. Pumroy spoke to a few PTA meetings explaining the function of the psychologist in the nursery school and the behavioral approach.

**Research:** Psychologists have always viewed research as important if not one of their primary functions. A small project was carried out with the teachers in order to get their evaluation of the importance they attach to different learnings that take place in the nursery schools. The teachers were asked to review the following areas:

1. **Creativity:** This included creativity in art, story telling, play etc.
2. **Verbal development:** This includes being able to describe events or stories orally as well as some recognition of letters and words.
3. **Basic behaviors:** This includes learning concepts that are required for our culture e.g. naming the colors, recognizing one's name, using crayon appropriately, putting on coats, etc.
4. **Social interactions:** This includes behavior appropriate in interacting with others, including sharing, cooperating and not being aggressive and selfish. Sensitivity to others feelings is also involved.
5. **Motor skills:** This includes the appropriate motor skills the child should have e.g. sliding down a slide, playing on a teeter totter, rolling a ball etc.
6. **Paying Attention:** This includes paying attention, listening to the teaching, concentrating for a reasonable length of time on a task, etc.

The teachers were then asked to rate each of the above on a five point scale as to how important she felt this was as a goal of nursery school. A more experienced teacher may have different views than those with less experience. The teachers were divided into three groups on the basis of experience in nursery school teaching. The results are presented below. The lower the score the more important was this area judged by the teachers.

(OVER)

### Problems:

Some of the problems presented in last year's report are less important this year. The teachers participating in the program know now what to expect in terms of the behavioral approach and, consequently, there is less concern regarding "philosophy". The role of psychologist is less perceived of as one in which the psychologist tests the child and/or provides a diagnostic work up. The psychologist is also less thought of as one who works with the teachers only on deviant children. During the year frequently positive behaviors of children were emphasized, behaviors in which the total class was involved (e.g. creativity, verbal development, motor skills etc.)

Some of the problems that were present were:

1. As some of the teachers had been exposed to the behavioral approach during the preceding year while others were new, it was necessary to almost conduct the session at two different levels at the same time. No doubt some of the teachers felt the pace was too fast while others felt it was too slow.
2. Perhaps related to the above problem is that some of the teachers were able to attend all of the sessions while others attended less regularly. Consequently, sometimes material covered in one session would have to be gone over again for those who missed it. Obviously, the teacher who attended each session got more out of the program.
3. There are still teachers who will not tolerate a behavioral approach even though it has always been presented as merely another alternative way of viewing children. The behavioral approach provides the teacher with another way (over and above her current one) of understanding children and dealing with problems. Perhaps, in the future, two kinds of psychological services could be made available. One which is behavioral in orientation and one which is more traditional. The teacher then would be allowed to select which ever she preferred.

### Plans for 71-72.

1. to continue as before in teaching teachers a behavioral approach to viewing their children.
2. helping teachers with problems they are having by changing the behavior the teachers feel in inappropriate.
3. as some of the teachers are more knowledgeable about the behavioral approach we will try to have these teachers assume more leadership in the sessions.
4. each year more and more reading material is being published on the behavioral approach and it is planned to make them more available to the teachers.
5. as parents frequently ask the teachers about problems they are having with their children it is hoped that we can work with teachers so that they in turn can help the parents.

As last year, it has been a stimulating challenge and the teachers have been enthusiastic, interesting and fun to work with, throughout the year.

Annual Report for the Psychological Services Program  
for the Maryland Council of Participating Parents Nursery Schools, Inc.

1971-1972

Donald K. Pumroy

This was the third year that Dr. Pumroy and the graduate students\* in the School Psychology Program at the University of Maryland have provided psychological services to the teachers. The procedures followed have been essentially the same for the last three years. Dr. Pumroy met monthly with the participating teachers; graduate students were assigned to the various nursery schools.

When the psychological services program was first initiated, probably the most important aspect was a focus on the children who presented a problem for the teachers. This, of course, is still important and during the year was handled in a variety of ways. One way was for the graduate student to work with the teachers so that together the problem could be resolved. On other occasions, the graduate student first conferred with Dr. Pumroy and then returned to work with the teacher. At times, in more of an emergency, the teacher telephoned Dr. Pumroy for suggestions about the resolution of a child's problem. On other occasions, teachers conferred with Dr. Pumroy following one of the regular meetings about a particular child.

As was mentioned above, there was much concern about a particular child's problem and certainly much effort was expended in that direction. However, over the last three years there has been a shift in direction of the efforts of the psychological services. Rather than focus on day to day problems after they have erupted, an effort was made to teach the teacher a behavioral approach to children so that problems could be prevented from developing. During the first two years, the behavioral approach has been taught to participating teachers, and communication of this knowledge composed the monthly meetings. Some of the teachers have been in attendance at these meetings for one or two years and, consequently, have become relatively sophisticated in the understanding and application of behavior principles in their classes. Because of the greater expertise that some of the teachers had, it was decided to change the content of the monthly meeting from a relatively straight teaching of behavioral principles to a focus on problems that coop nursery school teachers face. Thus, the monthly presentations were:

November: An overview of the behavioral approach and an orientation for the monthly meetings were presented. The behavioral approach was described as being concerned with the child's behaviors. Some of the behaviors the child showed were desired by the teacher (e.g. sharing, taking turns, concentrating on a task, putting on ones own clothes, etc.) and other behaviors were not

\* Galen Alessi, June Bond, Mike Boyle, Caroline Keedy, Joan Klagbrun, Deidra Lauck, Leon Litow, Anita Mauk, Judith Mazza, Rolf Mielzarek, Manuel Morales, Tamar Plitt, Duane Riddle, Jacob Roth, Marion Salvagno, Leo Weil, Diane Wilson, Linda Yaffe.

desired (e.g. crying, hitting, talking out of turn). The behavioral approach provides techniques for helping the teacher help the child to increase desired behaviors and reduce undesired behaviors.

An agenda was presented for the monthly meeting and the teachers were asked to complete a form describing a problem they had had with a child involving disruptive or aggressive behavior.

December: Disruptive aggressive problems.

The importance of defining and measuring the frequency of aggressive behavior was discussed. It was pointed out that frequently the teacher reinforces aggressive behaviors with attention. Rules should be presented clearly to the child so that he knows which of his behaviors is undesirable, not only should consequences be clearly specified, but they should be consistently and persistently carried out if undesirable behavior occurs. Probably the most effective consequences for undesirable behavior are a "time out" procedure or the temporary removal of positive reinforcement of behaviors incompatible with disruptive aggressive behavior was stressed.

The second part of the session was concerned with aggressive problems encountered by the teachers and raised on the forms they had completed at the previous meeting, e.g.: a child who hits and kicks other children, a child who grabs toys and equipment from others, a child who yells at other children, a child who says "I hate the teacher", a child who pulls hair.

At the end of the sessions, the teachers filled out a form describing a child who showed shy withdrawn behavior.

January: This session was concerned with shy withdrawn behaviors displayed by the children. Two kinds of behavior (operant and respondent) were important for this topic. Respondent behavior was introduced to differentiate the times when the children are actively frightened from the times they are trying to control the teacher. This is particularly true with crying and other fearful behavior. The cues the teacher can use to discriminate between the two situations were mentioned as well as the different ways they should be treated. A special case of shy behavior

was cited: the situation in which the new child at the school is fearful of being separated from his mother.

The second part of the session was concerned with specific examples the teachers had been faced with; such as: the child who moves from activity to activity without talking to the other children, the child who seems to relate to things more than people, the child who would not join a group in dancing, a child who had to have her mother with her or else she threw a tantrum, and the child who spoke only in a whisper if he talked at all.

During the session forms were completed by the teachers in which they described some interaction they've had with a parent concerning a child's behavior.

February: This session was concerned with teacher-parent interactions regarding some undesirable behavior shown by the parent's child. It was pointed out that the behavioral approach in which the current behavior of the child is the cause of the difficulty, is usually more acceptable to the parent. (This is in contrast to a more traditional view in which inner state terms (e.g. masculine, aggressive, shy, etc.) are used, and the parents perceive themselves as being guilty about something they have done in the past to cause the deviant behavior.) After the inappropriate behavior had been defined and a treatment program designed, the teachers and parents can then work cooperatively -- with desired behavior in the school being reinforced at home and vice versa. The unique situation found in the coop nursery school was discussed in which the child's parents frequently are in the classroom along with the teacher.

The second part of the session consisted of a discussion of specific problems raised by the teachers in which they interacted with a parent. Some then were: teacher and parent worked on "separation" problem at school which was also taking place at home, parent concerned about non-verbal behavior of child at home discussed by teacher, resolving an excessively aggressive child with cooperation of mother, child who used very loud voice was taught to use a softer voice by both parent and teacher.

A form was completed by the teachers during the session in which they described what they thought a child in their class should learn from nursery school about getting along with others.

March:

This session was focused on behaviors the teachers felt the children should show in getting along with others. It was pointed out that changing negative behaviors might be easier in the sense that there is greater agreement in labeling negative behaviors than positive behaviors. Thus, most teachers believe hitting, throwing blocks and yelling are undesirable behaviors that should be reduced in frequency but there seems to be less agreement about positive behaviors such as sharing, taking turns, and interacting with the group. Probably the first step in dealing with how a child gets along with others is to decide what behavior is deemed desirable and is currently not being shown by the child. The desired behavior then could constitute the goal the teacher has for the child. This might be talking, sharing with others, taking turns, etc. Next some record should be kept as to how often the child shows the desired behavior so that there will be a measure of success or failure when the treatment is applied. The techniques for changing the behavior were presented. The first method is what is called modeling. The teachers should model the correct behavior; if the teacher is trying to teach the child to share, the teacher should model sharing behavior herself. Secondly, when other children display the desired behavior the teacher is trying to teach a child, the teacher should reinforce any children displaying such behavior. Related to the techniques of modeling is that of role playing, in which the child is told what behavior to display. When children do display appropriate behaviors, as with the earlier procedures discussed, the child is reinforced. A third procedure mentioned was verbal cues in which the child was clearly told which behavior was desired as sometimes children weren't clear about what is expected of them.

The second part of the session was concerned with the behaviors the teachers had mentioned on forms they had completed the session before. Some of these were: settling arguments verbally, contributing to the group, playing with any of the other children rather than just one, and sensitivity to the needs of others. During the session the teachers completed a form in which they were asked to indicate what behaviors they thought a child in nursery school should learn in the ways of skills (knowing colors, numbers, reading, paying attention, following directions, etc.).

April:

The focus of this session was on the skills the children should learn in order to perform in our society. These skills, for the most part, are those that are needed for the child to be able to function at school or what might be called "academic" skills. It was pointed out at the beginning that thinking about the problem in a behavioral way may cause some conflict with certain teachers. The reason for this is, in part, due to the training most nursery school teachers receive. The usual orientation for nursery school teachers is a humanistic one in which the teacher presents an array of activities to the children. The children make the choice as to whether or not they want to participate in the activity. Consequently, some children may not learn certain skills because they do not participate in an activity. Perhaps another aspect of the reluctance to "teach" the child is that school is perceived by some as a punishing place (which for the most part it is). Maybe thinking is that children should not be subjected to an environment in which skills are taught until they reach six. But, doesn't this view cause a conflict within the teacher? A teacher, by definition of terms, always changes a learner. If a teacher does not change a learner then isn't that teacher less efficient and effective than one who does? Shouldn't a child who enters a class in September have learned something (or behave differently) the following June? If one feels there should be some change in the way a child behaves from September to June, then the next question is which behaviors should be changed. This might be viewed as the goals the teacher has for a particular child. Another way of saying the same thing is that a teacher may ask, "What does Johnny need to learn that I am able to teach?" By the teacher stating her goals in a precise behavioral way, then she can tell whether or not she is succeeding, as well as telling her which of her techniques are most effective. In following a behavioral approach we must first determine where the child is at the present time, ie. what behavior does he show initially. Next it is important to decide what behavior is desired. Care must be taken that the goal is realistic for a particular child. Experienced teachers usually have little difficulty in knowing what a child in their class is capable of doing. Once this "ultimate behavior" has been decided, the next step is to work out the procedures to reinforce the desired behavior or the successive approximations to lead to that ultimate behavior. This procedure should then be implemented with a continuation of the recording of the behavior

to see if the behavior is changing. If it's not, the modification procedure must be revised and tried again until the child's behavior is changed.

The second part of the session was concerned with a "discussion" of the behaviors the teachers felt a child should learn, based on the forms completed in the previous session. Some of the behaviors the teachers felt their children should learn were: following through on an activity, learning about numbers, picking up after an activity, putting outside clothes on in the winter, paying attention to directions, learning to think creatively and learning to try again after failure.

May: During this session a movie "Behavior Modification in the Classroom" was shown. As there were Day Care Center Teachers in the Rockville Presbyterian Church and free at the time of the session, they were invited in to see the movie. Following the movie the Day Care Center teachers raised the usual questions and concerns about Behavior Modification. An interesting discussion took place with the objections and questions raised by the Day Care teachers being answered by the Coop nursery school teachers. It was obvious that the teachers who had been attending the session were knowledgeable about Behavior Modification.

#### Evaluation of the Program

As has taken place year after year, a questionnaire was handed out to be completed during the May sessions. The teachers were asked to rate how helpful they thought the sessions were on a five point scale from "not at all helpful" to "very helpful". The results of this rating were:

| Scale              |   | #Teachers responding |
|--------------------|---|----------------------|
| Not at all helpful | 1 | 0                    |
|                    | 2 | 0                    |
| Somewhat helpful   | 3 | 2                    |
|                    | 4 | 4                    |
| Very helpful       | 5 | 4                    |
|                    |   | 10 Total             |

If we average the rating it would be 4.2 or between 4 and 5. This rating is similar to the rating received in 1969-1970 (4.0) and in 1970-1971 (4.58). It would appear that the program has been well received over the last three years. All of the teachers responding to the evaluation form said they had used a behavioral approach in solving a classroom problem. Some of the "problems" were: a girl who cried excessively, children who didn't

pick up after an activity, child who bit and scratched others, little girl who did not talk, homework problem with one of the teachers children, and a boy who should not sit quietly.

#### Future

Several suggestions for changes in the program for the year 1972-1973 were made by the teachers on the evaluation form. Other input came from some of the students participating in the program:

1. to continue teaching the Behavior Modification approach to the teachers. This is particularly applicable for the new teachers.
2. as some of the teachers have been exposed to Behavior Modification they are fairly sophisticated. Perhaps they could assume a semi-teaching role, by teaching, they could improve their skills even more.
3. resolving problems children present to the teacher. This of course, has been the primary concern each year.
4. prepare a bibliography for the teachers so they could read about the current work done in Behavior Modification.
5. involve the students to a greater extent and a clearer specification of their assignment at the nursery school.
6. if it is feasible, the establishment of one of the nursery schools as a location for trying out some of the research ideas based on Behavior Modification, and the presentation of this material (maybe via video tape recording) to the group at the monthly meetings.

Each year has been a challenge and this year was no exception thanks to the teachers who have been interesting, stimulating, enthusiastic, as well as fun.

A RESPONSE-COST TECHNIQUE:  
GOOD ECONOMICS IN THE CONTROL OF DISRUPTIVE BEHAVIOR

Charles Kerns

When possible, the classroom teacher should positively reinforce those behaviors desired and ignore (extinguish) those behaviors incompatible with the desired behavior. However, in some cases "disruptive" behavior jeopardizes the physical well-being of others. In these instances, the gradual process of extinction of a previously intermittently reinforced response may not be appropriate. Instead, an effective, fast, and explicit contingency is needed to reduce this behavior in frequency of occurrence. Two procedures, time-out from positive reinforcement and response cost, are mentioned here. A brief illustration is given of a successful response-cost contingency employed with a four year old nursery school boy.

Disruptive behaviors in the classroom have many aversive consequences for the school environment. They create management problems for the teacher, interfere with daily activities, often discourage teachers, and may present a danger to those in proximity to the disruptive stimulus.

In view of this, teachers could benefit from familiarizing themselves with techniques used in behavior modification which deal directly with these behaviors. As is true with all behaviors, the teacher should observe the disruptive behavior to learn about the antecedent conditions as well as consequences that follow the emitted response (teacher and peer reactions, for example). A close examination of these conditions will usually yield significant information regarding the conditions which, at least partially, maintain the undesirable behavior. A useful phrase for the teacher to remember is "behavior is maintained by its consequences."

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It can be assumed that if a disruptive behavior continues, even in the light of teacher intervention, consequences for the "acting out" subject must be reinforcing. A critical observation of the situation may reveal that the teacher is reinforcing the child with, for example, long explanations as to why he shouldn't throw crayons, hit Mary, and/or spit on Jim. As a consequence the child learns that these behaviors provide a great deal of reinforcing teacher attention.

Frequently, extinguishing or ignoring undesirable behaviors while reinforcing incompatible behaviors will serve to eliminate these aversive responses. However, when the behavior endangers the physical well-being of other children, as in hitting classmates, the teacher cannot allow it to gradually extinguish. An effective contingency to reduce this behavior is needed. Frequently, a time-out (TO) procedure wherein the child is removed from the immediate classroom situation for varying lengths of time is employed. During the TO period, opportunities for obtaining positive reinforcement are suspended. This period is believed to be mildly aversive.

Although this procedure can be effectively employed with disruptive children, it often has a disadvantage in that it requires the teacher to physically remove the subject from the classroom. During this procedure, the subject can, if not properly handled, receive reinforcing teacher attention.

An alternative technique in reducing disruptive behavior is to employ a "response-cost" procedure. Here an undesirable response is followed by removal of a positive reinforcer. Weiner (1962) is credited with coining the term "response-cost" in the behavior modification literature. He used points on a counter as conditioned reinforcers. He then deducted one point

following each undesirable response, making the response "cost" one point. Responding was rapidly and often completely suppressed with this procedure. The effect was greater than that typically obtained with time-out, and did not require as much attention to discriminative stimuli since the removal of the point is a salient cue in itself. Response cost, then, seems to function as a mildly aversive event. Response cost procedures are readily employed in token economies, just as they are in real monetary economies. Ayllon and Azrin (1968), using Veteran's Administration (VA) hospital patients, applied response cost directly to money rather than to tokens, since the hospital staff could control patient's access to the VA allotments, upon which patients depended for cigarettes, papers, and beverages. The purpose of the present paper, however, is to demonstrate the implementation of an effective response cost technique in an educational setting.

### The Case of David

David was a four year-old nursery school boy. His teacher was concerned about the small amount of success she had experienced in controlling the subject's (S's) behavior. In addition, S's parents as well as his classmate's parents were upset by his "aggressive tactics." Through an interview with S's teacher and observations of S, specific behaviors which could be labeled "aggressive" and/or "disruptive" were defined by the experimenter (E). These behaviors included hitting and squeezing classmates, throwing toy trucks, and grabbing gold fish from the aquarium. It was further observed by E that these behaviors were frequently followed by involved explanations from the teacher as to why "we don't behave in such a manner."

Therefore, it was agreed that David's teacher would ignore all disruptive behaviors with the exception of those that endangered other children, that is, hitting or squeezing other children. For this behavior, an explicit contingency was needed. But first, in order to obtain a measure of the severity of this problem as well as a baseline from which to compare our treatment effectiveness, a frequency of occurrence measure was needed. The frequency of hitting-squeezing behavior was observed and recorded for three days during the two and one half hour nursery school session. The behavior was found to occur with an average frequency of eight for the three sessions. It should be noted that a TO procedure was rejected because one had previously been ineffectively employed by the teacher. A

reason for its' lack of utility was that at home, S's parents had executed a similar procedure of placing S in a chair, away from reinforcement, following "disruptive acts" and paired this with spanking (punishment). Consequently, when this procedure was used by S's teacher, S began to hit and squirm to avoid the TO procedure at the nursery school. S was too difficult for the teacher to handle. In view of the physical difficulty and general inappropriateness of the TO procedure for S, a response-cost program was devised by E.

Since the consuming of a graham cracker and juice at cracker time had been observed by E to be a potent reinforcer for S, a cracker during this period was made contingent upon non-hitting-squeezing behavior. Stated another way, as a consequence of emitting hitting-squeezing behavior, David would be "charged" part or all of his cracker.

Specifically, the procedure was as follows: the teacher was instructed to divide David's cracker into six equal sections. Then she made an assimilated "crackerboard" by dividing a piece of brown construction paper into six equal sections to represent S's cracker at cracker time (during the last 15 minutes of nursery school). Whenever S engaged in hitting-squeezing behavior during the two and one half hour nursery school session his teacher would take the "cracker board" (conditioned reinforcer) over to S stating, "We don't hit; you lose one part of your cracker" while simultaneously removing a section of the "cracker" from the board. This procedure was operative following every incidence of the disruptive behavior. In addition, the teacher was instructed to explicitly and

enthusiastically reinforce those behaviors incompatible with hitting-squeezing. For example, she reinforced S when he constructively contributed to arts and crafts activities.

With this procedure, hitting-squeezing behavior went from an average of eight during baseline to three incidences on the first day of implementation, to one on the second day, and to zero on the third day. On the third day, E. received a phone call from David's teacher who claimed that "He is doing beautifully with no hitting or squeezing behavior." She also explained that the other children's parents were amazed and relieved by the change in David's behavior. Follow-up information indicates that the hitting-squeezing behavior has remained at the zero response level. Furthermore, his teacher reports that other disruptive behaviors have decreased in frequency. It seems that David is learning to discriminate between behavior which affords reinforcement and that which offers no rewards and/or costs him "goodies." As a consequence, the reinforced behaviors (desired behaviors) are on the increase.

## Proposal for Consultation with Annapolis Headstart Program

### INTRODUCTION

Teachers from pre-school through secondary school are faced with a multitude of problems each day in the classroom. Many of these problems center around the behavior of the children while in the classroom. There are a variety of ways to deal with these behavioral problems. Many teachers have evolved their own approach to deal with these problems. One way, shown to be effective in a variety of settings, is the behavioral approach in which teachers and parents can be taught behavioral remediation techniques. Thus, problems such as thumbsucking, talking out, inattention, out of seat, hitting, not interacting with others, etc., can be understood and dealt with successfully. Recent research (Betancourt, 1971; Jacobson, 1969; Madsen, 1968; Reynolds et al, 1968; Risley and Hart, 1968; and Skiba et al, 1971) has specifically shown the effectiveness of behavioral principles and contingency management applied to preschool children, and in Jacobson (1969) and Madsen (1968a, 1968b) specifically to a head start program.

### OBJECTIVE

To communicate behavioral principles to teachers in the Annapolis Head Start program via a workshop with supportive consultation services from Associates for Behavior Change, 4313 Hamilton Street, Hyattsville, Maryland.

### PROCEDURE

An inservice program would be given by Associates for Behavior Change, which would consist of an initial 2 days of workshop with a third day a few weeks later, plus 17 1/2 days of ongoing consultation services. The primary objective of the 1st 2 days of the workshop would be to have teachers and aides in the Head Start program be familiar with the behavioral point of view and behavior modification. As part of the workshop, they would be given supervised en vivo experience in the application of behavioral principles to a child.

### BEHAVIORAL RECORDING SKILLS

Teachers and aides would be taught behavioral recording procedures (time sample, time block, duration, and tally) and through the use of videotape and direct observation gain skills in its application. For the Head Start personnel to gain skills in behavioral recording procedures is a vehicle through which the consultative team can maximize their efficiency in helping to remediate problems.

### EN VIVO EXPERIENCE

Pumroy has developed a series of inventories in which "Basic Behaviors" (eg. left-right discrimination, color discrimination, coin discrimination)

Consultation Proposal Cont.

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of pre-school children can be assessed. (Suter, 1969) The Basic Behavior Inventory will be the vehicle through which teachers and aides will gain en vivo experience with behavioral modification. Once teachers and aides are familiar with procedures in a structured situation, consultative services will support their use of behavior modification in the less structured classroom environment.

WRITTEN MATERIALS

Materials relating to Behavior Modification and classroom management will be distributed. Utilizing an interview procedure (Ferster, 1968) which will help to maximize learning by the Head Start teachers and aides, technical information on Behavior Modification will be disseminated. Evaluation of these learnings will be via a pre-test post-test. A final third workshop day will be held to sharpen skills and disseminate new information.

ON-GOING CONSULTATIVE SERVICES

To support and maintain those knowledges accrued in the workshop, to help the teachers and aides with problems in the class, and to establish antecedents to minimize disruptive behavior. Seventeen one-half day consultative during the school year.

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SECTION 2.1.0

Behavior Modification taught  
to teachers in the Public Schools.

## Section 2.1.0

### Behavior Modification Taught to Teachers in the Public Schools

The School Psychology Program has been extremely active in the imparting of behavior modification knowledge to teachers, principals, counselors and other personnel in the public school system in the state of Maryland since 1969.

The counties in Maryland served by the School Psychology Program include the following: Prince George's, Anne Arundle, Montgomery, Harford, Cecil, Charles, Dorchester, St. Mary's, and Calvert. The behavior modification approach has been eagerly embraced by teachers in the school system and their evaluation of the presentation of the material has been most laudatory. A report entitled "A Report on Teaching teachers behavior modification principles by University of Maryland School Psychology Program Personnel (1971-1972)" is presented at the end of this section.

The work done in the public schools is divided into different sections. The first section (2.2) describes courses that have been given in which behavior modification has been taught. The next section (2.3) describes workshops taught by School Psychology Program personnel. The next section (2.4) describes consultative service on behavior modification given to individual teachers. The following section (2.5) outlines courses and consultative services provided to teachers of the mentally retarded and the last section (2.6) enumerates the presentations and talks given to PTA's and other groups by personnel

in the School Psychology Program. Each section is broken down chronologically, with work occurring before July, 1972 in one part, work in progress in the section following, and future plans last.

#### 2.2.0 COURSES TEACHING TEACHERS BEHAVIOR MODIFICATION

##### 2.2.1 WORK DONE IN THE PAST

A. In the fall of 1970, a series of training sessions in behavior modification was given at Forest Knolls Elementary School, Silver Spring, Montgomery County. The objectives of the course were to provide training in theory and implementation of behavior modification. In this course, a short presentation was made of technical information, followed by small group discussion led by personnel from the School Psychology Program. Approximately fifteen teachers were involved.

B. In the fall of 1971, the Active Student Participation Program (A.S.P.P.) was initiated at Forest Knolls Elementary School. In this course, consisting of fifteen, two and one-half hour sessions, teachers gained skill in the application of behavioral technology to their classes. In October of the same year, due to the increasing demand by the teachers for training in behavior modification, additional A.S.P.P. courses were offered at Whittier Woods Elementary School, Montgomery County and Northfield Elementary School in Howard County. In all, sixty individuals received training from members of the School Psychology Program. Although mostly teachers were enrolled in the course, a number of principals, counselors, and school psychologists received training as well.

C. The A.S.P.P. was again given in in the spring of 1972 for teachers on the Eastern Shore of Maryland. The course was given through the University College and was presented at Chesapeake College in Wye Mills, Maryland. The format was essentially the same as it was for the three courses given the previous semester and cited above in Section 2.2.1. There were 21 teachers enrolled in the course.

A report, detailing the A.S.P.P. program and how it was evaluated is presented at the end of this section as well as sample materials. In addition, case studies, written by teachers enrolled in the course are included to demonstrate, in part, the level of competence attained.

D. Seminars were organized in Anne Arundle county by Manuel Morales, representing the School Psychology Program. These seminars in behavior modification consisted of teaching teachers behavioral techniques to decrease the frequency of disruptive behavior and to help the children in their learning. These programs became part of the general county inservice program. Emphasis in this program is placed on ways of teaching the teachers to prevent the occurrence of behavioral problems. At the end of this section a copy of "TEAM", a journal written by and for teachers using behavior modification involved in the Anne Arundle program, is included. Approximately 100 teachers were involved.

#### 2.2.2 WORK CURRENTLY UNDERWAY IN FALL 1972

A. The Active Student Participation Program in behavior modification is continuing this current year at Albert Einstein High School in Montgomery

County. The program (briefly described in 2.2.1) has 32 teachers enrolled.

B. Two courses in behavior modification are being taught in Montgomery County through the Career Program Branch of the Montgomery County Board of Education. Credit is given for re-certification. Representing the School Psychology Program in these courses are Galen Alessi and Michael Boyle. Approximately 38 teachers are enrolled in these courses.

#### 2.2.3 FUTURE PLANS

A. Two Active Student Participation Courses will be taught in the Spring, 1973. Projected enrollment is approximately 20 teachers per class.

B. The School Psychology Program, represented by Margaret Vogel, will be teaching behavioral principles to teachers, class aids and speech therapists at the Easter Seal Treatment Center in Rockville, Maryland. Projected enrollment is approximately fifteen. It is planned that meetings will be held weekly for eight weeks.

C. The School Psychology program will be offering a course in behavior modification at Riverdale Elementary School through Caroline Keedy in an experimental program called Continuum in Special Education. In this course, behavioral principles will be taught and the teachers involved required to complete a case study in which they effectively changed the behavior of a child. Projected enrollment in this course is 15.

D. Representing the School Psychology Program in Charles County, Maryland, will be Galen Alessi who will provide a behavior modification training course to teachers of some 1200 students in kindergarten through third grade. In this course, teachers will be taught to use new curricula

packages, classroom observation techniques and reinforcement theory.

E. A course in which teachers are trained in behavioral techniques will be conducted in Prince George's county by Jack Roth, School Psychology Program. Included in the training will be ways in which teachers can use behavioral techniques to modify hyperactive behavior.

F. The School Psychology Program will begin a course for teachers in behavior modification taught by Anita Mauk in the Baltimore City School system. In this course, teachers will learn behavioral techniques and their applicability to classroom management.

G. During the 1972-73 academic year, the School Psychology Program, through Manuel Morales, will be selectively training teachers who will serve as a liaison resource teacher in behavior modification. These teacher "consultants" can provide ongoing support services to maintain behavioral treatment programs.

### 2.3.0 WORKSHOPS IN BEHAVIOR MODIFICATION

#### 2.3.1 WORK DONE IN THE PAST

A. Workshops in 1969-1970 were given to teachers in Anne Arundel County by the School Psychology Program through Manuel Morales. The objectives of this program were to give teachers an introduction to behavior modification techniques in a short length of time. Emphasis was placed on the applicability of behavior modification to preventing behavior problems. Approximately forty teachers were involved.

B. A workshop was given by Marilyn McGilvrey in which approximately 35 teachers were introduced to behavioral techniques. Individual vignettes were used for small group discussion which provided additional material to the group at large. Emphasized was the usage of reinforcers found in

the natural environment, rather prosthetic devices.

C. "Mini-inservice" workshops were given by the School Psychology Program through Michael Boyle in Harford and Cecil Counties. These inservice courses were intended to provide some initial training in behavior modification. At the end of this section is an outline of the places of the workshops and the numbers of people included; the total number taught was 47. In addition, 36 teachers received training in a somewhat longer (9 week) workshop in which both group and individual methods for contingency management were presented. At the end of this section case studies the teachers wrote as a result of this training are presented.

D. Charles Kerns, through the School Psychology Program, presented a number of workshops to teachers on behavior modification between August 1971 and January 1972. In each of the workshops, the general outline of the workshop has been: 1) definition of the problem behavior, 2) recording of baseline information, 3) creation of treatment proposal to remediate the problem and 4) assessment of the effectiveness of the treatment.

E. Contingency Management and contingency contracting were taught to teachers at the Hamilton Child Guidance Clinic, Hyattsville, Maryland. The request for contingency management training grew from the requests by the teachers. In this workshop, the teachers were trained in: 1) writing instructional objectives and definition of behaviors, 2) gathering academic materials that corresponded with the objectives, 3) writing diagnostic tests for each student to evaluate his academic performance and 4) establishing a reinforcing even area which was made contingent upon appropriate behaviors.

F. Dr. Donald K. Pumroy, Director of the School Psychology Program, and two advanced students presented a behavioral point of view to teachers

and school personnel of Dorchester county. The two day workshop was held on April 14 and 15, 1972.

### 2.3.2 WORKSHOPS CURRENTLY UNDERWAY OR CONDUCTED IN FALL 1972

- A. An introductory workshop was presented by Judith Mazza of the School Psychology Program (Sept. 1972) to provide an introduction to behavior modification to teachers at Good Counsel High School. Approximately 40 teachers were involved on "professional day". Audio visual aids, i.e. movies, slides, and tapes, accompanied the presentation.
- B. A series of two to three session workshops are currently being given in behavior modification by Charles Larson to Junior High School Teachers in Anne Arundle County. The objectives of the workshops are to increase communications between the school psychologist and junior high school teachers concerning behavior modification. Topics which will be treated with a behavioral point of view include: 1) teacher-parent communications, 2) the emotionally disturbed child, 3) the learning disability child, 4) the retarded child, 5) teacher use of parent techniques, 6) classroom token economies.
- C. Workshops training eight teachers at the School for Contemporary Education in Columbia, Maryland in behavior modification are being conducted. Emphasis is placed on designing specific programs for individual students.
- D. The School Psychology Program as represented by Dr. Donald K. Pumroy, Judith Mazza and Nelson Zahler will present a workshop on November 14, 1972, to teachers on the Eastern Shore under the auspices of the Maryland State Department of Education. Approximately 70 teachers are expected to attend.

### 2.3.3 FUTURE PLANS

A. As a variety of workshops have been given, much has been learned about such presentations. Plans are currently underway to develop a slide presentation as well as written material that can be used to improve the learning that takes place in future workshops.

### 2.4 CONSULTATION WITH INDIVIDUAL TEACHERS.

#### 2.4.1 WORK DONE IN THE PAST

A. In September of 1969 a sixth grade teacher at Francis Scott Key School, Washington, D.C. was taught behavior modification principles. Under supervision, a classroom management program was devised.

B. In Anne Arundel County, individual consultation was established with teachers who were experiencing difficulty with students in their classes. From 1968 to 1969, objectives of consultation was the training of individual teachers in behavioral management techniques. The training was carried out within the classroom setting and with much one-to-one work with the teacher. Approximately 10 teachers were involved.

C. Consultative services were provided by the School Psychology program to the Harford County Mental Health Clinic, under Dr. Paul Stonesifer. Behavioral approaches to dealing with the crisis intervention project was provided. Approximately 15 teachers received training in behavior modification through these services.

#### 2.4.2 WORK CURRENTLY UNDERWAY IN FALL 1972

A. In a program sponsored by the State Department of Education (see section 4 ) the School Psychology program as represented by Judith Mazza

and Dr. Donald K. Pumroy are providing individual training in behavior modification to nine teachers on the Eastern Shore. These teachers are, in turn, being trained to teach behavioral approaches to others. This "multiplier" effect is explained in section 4.

B. Through the internship of the School Psychology Program individual students are consulting with numerous teachers counties surrounding the University of Maryland. These ongoing services are provided through-out the academic year.

C. Individual consultation is being provided at Riverdale Elementary School. Approximately fifteen children are on individual contingency management programs. One program's goal is aimed toward positively influencing the pupil's self-concept and increasing appropriate behavior toward peers. Other individual programs are aimed toward reinforcing appropriate classroom behaviors.

#### 2.4.3 FUTURE PLANS

A. The "multiplier" project, described above, is to be continued through the spring of 1973. The ultimate aim is to train school personnel so that they are able to teach teachers the behavioral approach.

B. With the expansion of the internship program there will be advanced graduate students working in the schools near the University. Each of them will be knowledgeable about behavior modification so that they can work with teachers in helping them teach the children.

C. As the program graduates students and they find jobs in the state system, there will be an even greater dissemination of knowledge about

behavioral principles. There are currently 10 students from the program employed by the state as school psychologists.

## 2.5. SCHOOL PSYCHOLOGY PROGRAM APPLICATIONS TO SPECIAL EDUCATION

### 2.5.1 WORK DONE IN THE PAST

- A. A course in behavior modification for teachers of the adult mentally retarded was given in the Spring, 1972. The program consisted of ten two and one-half hour sessions at one week intervals. Presentations utilized lectures, discussions, videotape recordings, role playing, and observations. A significant part of the program was the teacher's application of behavioral principles. Ten teachers from six counties in Maryland participated. The School Psychology representative who designed and implemented this program was Rolf Mielzarek. Examples of materials used in this program can be found in the appendix for this section.
- B. A workshop in behavior modification was presented to the teaching staff of a special education center for the mentally retarded. The objectives of the program were to increase skills and knowledge of behavior modification and its application to the special education classroom. Rolf Mielzarek presented this workshop which lasted three hours. Attending this workshop was the principal and a staff of 28 teachers from Princess Garden Special Center of the Prince George's County School System.
- C. In the fall of 1969, the School Psychology Program, through Margaret Vogel, Cheryl Burg and Reggie Stark, met weekly with a staff of approximately 12 teachers to teach behavior modification principles. During this period, teachers were trained to devise programs for individuals in their classes. This consultation service was provided to the Hope Day Center for Retarded

Children.

#### 2.5.2 WORK CURRENTLY UNDERWAY IN FALL 1972

A. Consultation services are being provided to Charles, St. Mary, and Calvert Counties through Ken Manges. As part of the consultative services, teachers are taught to establish and organize educational objectives around behavioral guidelines. Individualized workshops are conducted with day care teachers, special education teachers, public health nurses and social service workers. In the appendix, a listing of individuals receiving these services can be found.

#### 2.5.3 FUTURE PLANS

A. While there are no specific plans underway to work with special education teachers and those dealing with the retarded, there will, no doubt, be a variety of workshops, presentations, and consultations that will take place.

#### 2.6.0 TALKS, PRESENTATIONS MADE TO TEACHERS BY SCHOOL PSYCHOLOGY PERSONNEL CONCERNING BEHAVIOR MODIFICATION

##### 2.6.1 WORK DONE IN THE PAST

A. From September 1969 to July 1972 there have been numerous PTA presentations by the Director of the program and advanced students. It is felt that not only do some of the teachers learn about the behavioral approach, but, also, parents are exposed to this point of view. With parents participation it should be easier for teachers to explain the behavioral approach to them when the need arises.

B. Presentations were made during two inservice professional days in Harford County on a behavioral approach to classroom management and learning disabilities by Michael Boyle at Bel Air Middle School, Bel Aire, Md. and at Halls Cross Roads Elementary School, Aberdeen, Maryland.

#### 2.6.2 WORK CURRENTLY UNDERWAY IN FALL 1972

A. Dr. Donald K. Pumroy will present a talk to the Maryland State Teachers Association on November 18th, 1972 entitled "Trends in Student Discipline and Behavior Modification."

#### 2.6.3 FUTURE PLANS

A. Because of scheduling, specific dates for presentations have not been arranged. Judging from the popularity of presentations in the past, there will be even more in the future.

APPENDIX FOR SECTION 2.1.0

Behavior Modification taught to teachers  
in the Public Schools.

- 2.7.1 Report on teaching teachers Behavior Modification principles by University of Maryland School Psychology Personnel (1971-72).
- 2.7.2 Case studies done by teachers taught in the A.S.P.P. Course.
- 2.7.3 Teachers Experimental Analysis of Motivation (TEAM), Spring, 1972.
- 2.7.4 Mini Workshop Data. Michael Boyle
- 2.7.5 Classroom applications of Reinforcement Theory (CART). (1971-72)
- 2.7.6 Special Education Consultation. Summary.
- 2.7.7 Regional In-Service Training for Adult Activity Centers, Spring, 1972.

Report on teaching teachers  
Behavior Modification principles  
by University of Maryland  
School Psychology Program Personnel (1971-72)  
Judith Mazza  
Donald K. Pumroy  
Nelson Zahler

Behavior Modification particularly its application in the classroom has been receiving much publicity recently. As a result of such publicity and a booming explosion, any professionals currently working in the field of education find themselves lacking skills in areas such as Behavior Modification. In order to help rectify that situation, to bring these skills and knowledge to public school personnel, four sections of Behavior Modification and Classroom Management (EDCP 499H) have been taught in three counties in Maryland (Montgomery County, Howard County, and Caroline County). In all, some eighty school personnel (including school psychologists, guidance counselors, principals and teachers) received training from personnel in the School Psychology Program at the University of Maryland in Behavior Modification since September, 1971.

The course itself, consisted of fifteen two and one-half hour sessions, and was held weekly. Beginning with an emphasis on defining a problem behavior in their classrooms, the course trained participants in methods of observation and recording. After having practiced and demonstrated these skills, the students were instructed in: 1) behavioral techniques to increase the frequency of desirable behaviors (via positive and negative reinforcement, shaping), 2) techniques to decrease the frequency of undesirable behaviors (through extinction and punishment) and 3) the construction of concrete treatment programs to be applied to their "behavior of concern" of a child as defined in the beginning of the course. The baseline recordings (begun as exercises in recording behavior) were continued throughout the treatment phase of the program. The resultant case studies were written according to a specified format and distributed as additional source materials to all class members enrolled in the course. In addition, more complex techniques of behavior change were discussed (such as reinforcement of incompatible behaviors and stimulus control) as well as the application of contingency programs to groups of children in the classroom.

Teaching methodology used in this course is of some import. The instructors modeled a behavioral approach in each session. Every session of the course was begun with the distribution of a "session agendum." This gives specific behavioral objectives for the sessions, the sequence of activities by which these objectives were to be accomplished, and the assignment for the following week. A group discussion would follow, in which the individual's treatment programs and their implementation were the main topics. This helps to give the students practice in using behavioral terminology. A class exercise (an ungraded short answer quiz based on the lecture and reading materials of the previous week) was then distributed. This gave feedback to the student and the instructor (an item analysis of the questions on the class exercise is done immediately by one of the instructors) and prompt class discussion. An interview procedure was implemented for students to show mastery of the text. These intr-student interviews increases fluency using behavioral terminology, highlighted points in the text, and reinforced the student for reading the material. Case Exercises are also used. These are anecdotal records, and give the student practice in identifying application of behavioral principles and devising behavioral remediation programs. This exercise was usually done in groups of four or five. Each group presented its behavioral analysis and treatment program to the rest of the class. These exercises were used concurrently with the individual classroom Behavior Change Project. In this project, a classroom problem, defined by the teacher was examined behaviorally, and a Behavior Modification program was implemented.

Evaluation of the course was done in two ways. The first is in the form of a pre-test post-test of terminology and technical definitions relevant to principles of Behavior Modification. The second way is through an evaluation form distributed by the instructors.



Figure I. The percentage of teachers who passed each item on the pre- and post test.

Figure I shows the percentage of people that gave correct definitions of terminology before and after taking the course in Behavior Modification and Classroom Management. All of the post-test scores are significantly above the pre-test performance.

Using the data gathered from the instructor-distributed course evaluation, it was found that this was the first University of Maryland off-campus course for many of the students. Of the students who had taken University of Maryland courses previously, it was reported that this course was above average in terms of applicability of content to the classroom, organization and structure. It was noted a number of times that this course required more work than other off-campus courses taken. Eighty-six percent (86%) of the students enrolled in EDCP 499H reported that course content was an important variable in their decision to enroll; knowledge of behavioral techniques was a goal. In fact, some respondents referred to recent publicity given to Behavior Modification as being an impetus for their subsequent involvement.

Favorable comments were received regarding the textbook (Madsen and Madsen, Teaching/Discipline, New York: Allyn and Bacon, 1971) and the interview procedure used to demonstrate mastery of the text. There were comments for improvements to be made in the course, however, these were high variable and showed no consistent trend.

All of the students enrolled in the course stated they planned to incorporate their knowledge of behavior principles in their classrooms in the future. Proposed changes the teachers felt they would make in their approach to teaching as a result of having learned behavioral principles include increasing the use of positive reinforcement, thus being more positive in their interactions with the children; making it easier for the children to learn by arranging their environment in a way to increase the probability of on-task behavior; reducing problem behaviors; and having better control over their classrooms.

In a follow-up questionnaire distributed six months after the conclusion of the course taught in the Fall semester, all teachers responded that they have continued to use Behavior Modification principles. A majority of the reports specifically mentioned the use of positive reinforcement, the rest referred less specifically to techniques learned in the course. Almost all had discussed Behavior Modification principles with other teachers, school personnel and parents. With few exceptions, there were requests for more information and/or coursework in behavioral approaches to classroom management.

The responses of the teachers to the course content has been overwhelmingly positive. A recurring comment is that it would have been beneficial to have mastered this material earlier so it could be incorporated more easily in their teaching repertoire. In an effort to acquaint teachers with this methodology earlier in their career, preliminary steps were taken during the Spring, 1972. Short discussions were held with student teachers in seven centers about behavior modification by Dr. Donald K. Pumroy and Nelson Zahler. A report was prepared concerning this undertaking. The response of these student teachers was also overwhelmingly in favor of having coursework in Behavior Modification incorporated into their program by the College of Education.

2.7.2 Case Studies done by the teachers

taught in the A.S.P.P. Course.

Effects of Social Reinforcement on Tardiness for Class

Jane Magrojan  
North Carolina High School

Problem

Tardiness for class

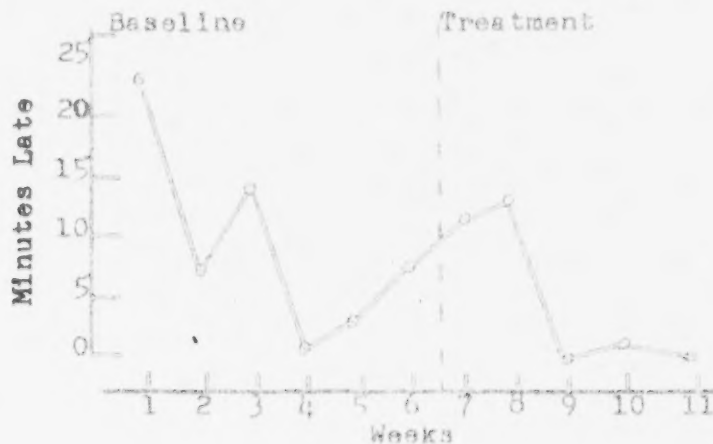
Description of child and setting

A pretty seventeen year old high school junior who seems to enjoy being the center of attraction. At 9:00 A. M. student leaves main school, coming to Vocational Center, changes into nursing uniform and is to be in classroom by 9:10 A. M.

Procedure

Data were collected (number of minutes late) each morning by modifier as J arrived and recorded by diary and time block method. The contingency of promptness for class was discussed and a treatment plan of social reinforcers and extinction was begun. The social reinforcers were verbal, facial expressions, activities in the classroom. If J came in late, no attention was given her. (extinction)

Graph



Results and Discussion

Referring to graph, an improvement over the baseline was noted after contingency of class time was discussed with student. After treatment was begun, she was late for two mornings and then there was a reduction in her tardiness. Before treatment the behavior modifier was reinforcing J coming in late; during treatment extinction was applied to her late behavior. The modifier concludes that her (modifier) attitude toward other behavior problems of the classroom was improved since positive reinforcement is being used. Without data collection, the modifier never would have known how often the behavior was omitted, or when and if there was improvement.

A STUDY IN BEHAVIORAL MODIFICATION

BETSY A. GRIFFITH  
RIVERVIEW JR. HIGH SCHOOL

PROBLEM

The student is not turning in assigned homework.

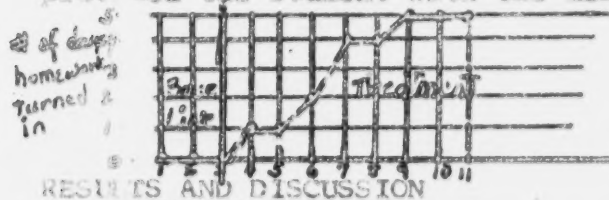
DESCRIPTION OF CHILD AND SETTING

The child is a 7th grade, 13 year old male whose records indicate no physical problems or learning deficits.

The data for this problem was obtained from a 2:25-3:10 social studies class over a period of 2½ months.

PROCEDURE

I recorded the daily data by tally; I supplemented by the diary method. Each day an assignment was turned in I gave a small toy car plus social rewards; thus, the student received immediate tangible reinforcers. In order to provide a basis for the extinction of the daily reinforcer, every time he turned in homework for three days in succession I rewarded him with half of the pieces to a larger car model which he could put together. This added reinforcer also provided the student with the means of noting success.



From the results indicated on the graph, it is evident that the student began to turn in his homework. I think this change occurred because the student was: (1) aware of the exact behavior expected (2) not receiving a payoff for undesirable behavior (3) immediately receiving desired rewards (tangible and intangible) for acceptable behavior and (4) being made aware of his progress. These results and others like mine should stimulate educators to try this method of dealing with problems - it's a very positive approach to a problem (discipline) which I feel is quite prevalent in our schools and a problem which will need a very firm approach in the years to come. I feel that I conducted my problem with a professional behavioral approach and that the results of my procedures clearly indicate the benefit of continuing the behavioral approach with other problems. Aside from the original student modification of behavior which I desired and received, I, myself, experienced a behavioral change with my relationship to students and their problems.

# Effects of Positive Reinforcement on Dressing in Physical Education Class

Edward J. Mink

Colonel Richardson Junior High School

## Problem

Bob does not change from his regular school clothes, shoes and socks into the regulation gym suit, tennis shoes and sweat socks, which are required for my physical education class.

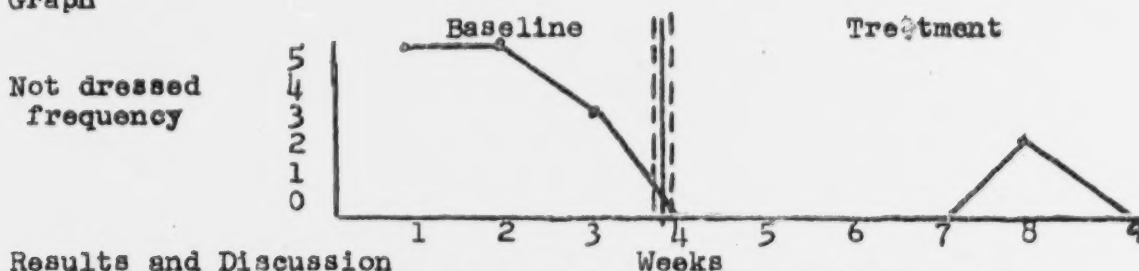
## Description of Child and Setting

Bob is a fifteen year old, eighth grade student in Colonel Richardson Junior High School.

## Procedure

Each day Bob was present I recorded by the tally and diary methods Bob dressing or not dressing in regulation gym attire. Before treatment I discussed the problem with Bob and discovered during the session that he was especially fond of industrial arts. We then agreed that every week that he dressed for four consecutive days, I'd let him go to the industrial arts shop in lieu of physical education class. I also gave him daily verbal praise. Later, since he was absent on the average of one day a week, I decided to add to the contingency by saying that if he dressed and was present for five consecutive days, he could go to the shop for two periods.

## Graph



## Results and Discussion

Before treatment, my recorded data show that Bob dressed two days for physical education class, which meets the second period (9:58-10:58) each day and did not dress thirteen times. As a result of the positive reinforcement, both extra shop privileges and the verbal praise, not dressing behavior was drastically reduced. During the six weeks of treatment, Bob failed to dress completely only two days. Then he dressed with the exception of sweat socks and wanted to participate. Because of the drastic improvement, I ignored the fact that he wasn't completely dressed and allowed him to join in the softball game.

# The Making of a Bookworm

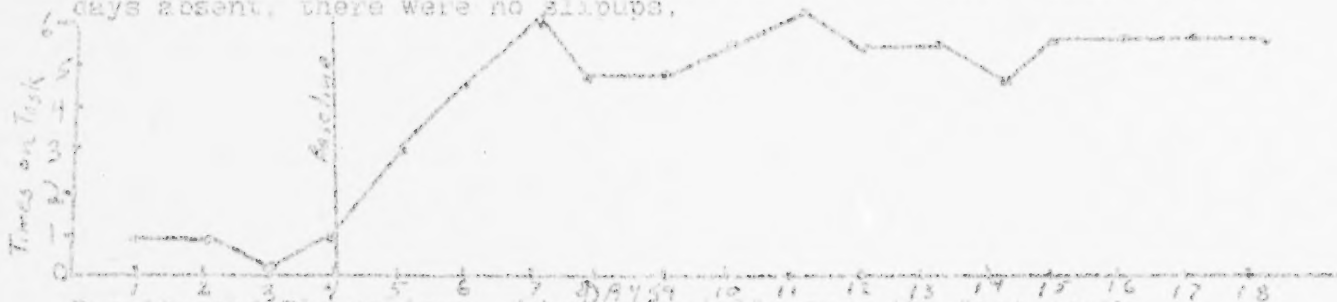
Gerald F. Bisset  
Col. Richardson Junior High

Problem- John was not reading.

Description of Child and Setting- John is a good sized 13 year old seventh grader who is somewhat slower than the average learner.

This study was conducted on a daily basis during a free-reading period in my conventional classroom from 8:45 to 9:10. During baseline I was constantly fussing with the student which stopped during treatment.

Procedure- I recorded the data by checking on task or off task at five-minute intervals from the start to the end of each period--a time sample procedure. After an initial conference with John in which I asked him what he liked to read and if I could help him find something he liked, I completely snubbed him when he was off task and socially reinforced him when he was on task. Other than days absent, there were no slipups.



Results and Discussion- John, especially over the last month, has become an avid reader. The graph shows that he is not reading 100% of the time each day, but he causes no problem and is reading with comprehension. I know about the comprehension because he has told me about the contents of several books. In fact, he takes books home and reads them. In following this up by working in a similar manner with other students--there were five with the same problem--the atmosphere in the reading period is very quiet in a relaxed way--no longer in a tense way to avoid the wrath of the teacher. There is a mutual affection between the student and me that did not exist before. We are all happier.

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*Spring*  
1972

TEACHERS EXPERIMENTAL ANALYSIS of MOTIVATION

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When a group of teachers in Anne Arundel County, Maryland began experimenting with the principles of learning they found their students more "motivated" in doing their school work. The teachers soon realized the importance of communicating their techniques and findings to their colleagues. The Teachers' Experimental Analysis of Motivation (TEAM) was then created in order to accomplish this goal.

Thus TEAM's main purpose is the publication of research carried out by classroom teachers or anyone involved in education. Research for TEAM does not always have to include fine statistical analysis of data. The journal will publish work where improvement in the student's social and academic activities is clearly related to specific procedures introduced or used by the teachers.

TEAM also welcomes articles of a theoretical nature when written to clarify existing "motivational" techniques or to introduce new ones.

Manuscripts and general correspondence should be sent to: TEAM, Psychology Department, Division of Special Services, Anne Arundel County Board of Education, 27 Chinquapin Round Road, Annapolis, Maryland 21401.

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SPRING 1972

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THANKS

Thomas Anderson has moved to the University of Texas to complete his doctoral studies.

TEAM has been fortunate to have Mr. Anderson as an Associate Editor and wishes him much luck and success.

## THE PRINCIPAL: A SOURCE OF REINFORCEMENT

by

Robert Masters, Principal

Davidsonville Elementary School

Teachers working to apply positive reinforcement theory in the classroom often have difficulty locating ready and systematic reinforcers. This study grew out of a conviction that school administrators could prove to be a source of such reinforcers and that these in turn could assist, in general, the development and maintenance of acceptable student behavior.

The project was under taken using the most recent methodology of the science of behavior modification. That is:

1. Specification of behavior concerned
2. Obtaining an estimate of frequency
3. Applying possible reinforcers

### STUDENTS

Students included the entire student body (700) of the Davidsonville Elementary School. These were children from kindergarten to the sixth grade.

### DEFINITION OF BEHAVIOR

The writer wanted to increase the number of children who were rewarded by teachers in some manner and sent to the principal's office for further recognition. Additionally, he wished to diminish the number of children who were reprimanded by the teacher and sent to the principal for further punishment.

### BASELINE

During the twenty (20) day period, a complete record was kept on pupils sent to the office for disciplinary action. During this period and prior to it, there was no procedure for rewarding children in the office for positive behavior. This data was not made known to either children or faculty.

Figure 1 (Baseline) shows the average number of children sent weekly to the principal's office for punishment during the four week baseline period.

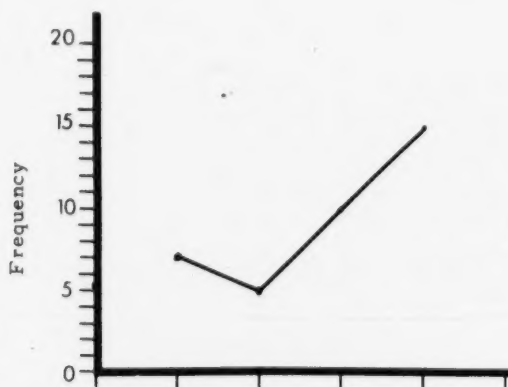


Figure 1. Average number of children sent to the office for punishment during the four weeks baseline period.

#### REINFORCEMENT PROCEDURES

Following the baseline phase, a twenty (20) day experimental phase was instituted. The program as outlined below was explained to teachers and announced to children. During this period, an honor roll was the focal point. Any student could be listed on the honor roll according to the following criteria:

1. Academic achievement
2. Social behavior (courtesy, leadership, etc.)
3. Relative progress in academic achievement or social behavior

The honor roll was placed on a prominent bulletin board. Each child's accomplishment was first acknowledged by the teacher who, then, gave a note to the student and sent him to the office to be acknowledged by the principal in a ceremony wherein the name and a gold star were placed on the roll. Periodically, the names were read over the intercom and listed in the principal's newsletter.

#### FINDINGS

Figure two shows the average number of children sent to the office weekly for punishment during the four weeks of the baseline and experimental periods.

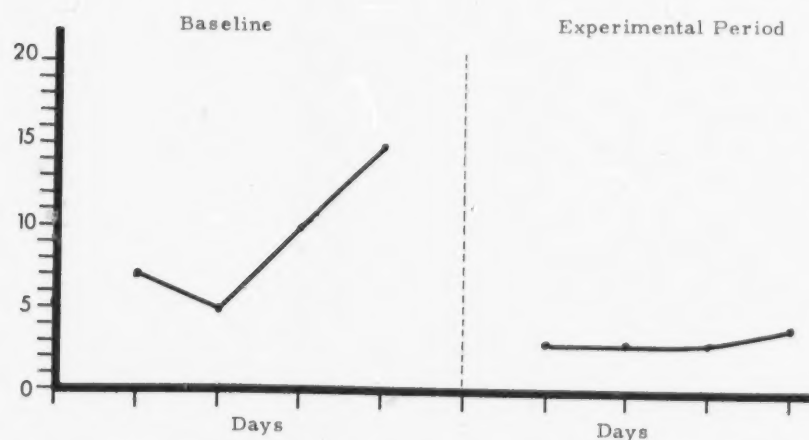
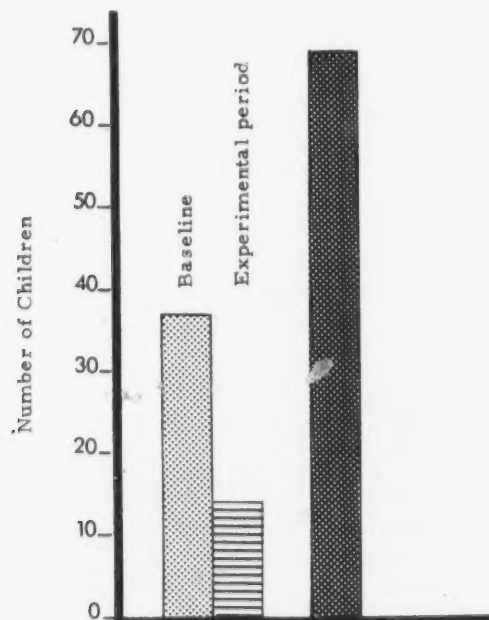


Figure II. Average number of children sent to the office for punishment during the four weeks of the baseline and the four weeks of the study, (experimental period).

Graph I compares the total number of children sent to the principal's office for punishment during both the 20 day baseline period and the 20 day experimental phase. It also shows (darkened column) the total number of children sent to principal's office for recognition during the experimental phase.



Graph I. Total number of children sent to the principal's office for punishment during both the baseline and experimental periods. Darkest bar shows total number of children sent to the office for recognition during the experimental period.

### DISCUSSION

Figure two, and graph I shows that during the experimental phase of the project the number of children sent to the office for punishment decreased. That is, as the number of children sent to the office for approval and recognition increases, the number of children sent to the principal for punishment decreases. Why?

The many variables at play in such a study make even the simplest of conclusions tenuous. The first of these is coincidence. Baseline data was obtained immediately prior to Christmas vacation and may thus not represent the average number of children sent to the office in a typical week.

Secondly, one must consider experimenter error and inconsistency. Any principal is constantly confronted with a variety of tasks and interruptions, making systematic and accurate record-keeping a real chore. In such a situation, errors in data collection are a possibility. However, it should be noted that in this study errors in recording were minimized since only those cases were recorded in which children were sent to the office with a written complaint from the teacher. Emergency calls were also recorded.

Whether or not the reduction in misbehavior reports was due to an actual change in pupil behavior is unanswered by this study. What may be true is that the perception of the principal's role may have been altered by the procedure. The principal as a punitive agent is well documented. He may suspend or apply corporal punishment at his own discretion. It is not unreasonable, therefore, for teachers to turn to the principal in certain instances for punitive measures to assist in the management of behavior.

The teachers involved in this study were already striving to provide regular positive reinforcement for their students. However, this project made available an easily accessible and rather impressive type of positive reinforcement.

Evaluation questionnaires were given to the teachers and the results are as follows:

1. Over 90% felt it had been a useful tool in managing behavior

THE PRINCIPAL  
MASTERS, R.

2. Nearly 100% felt it was "VERY EASY" or "EASY" to administer
3. Over 90% felt it should be continued

The consensus was that the children, in general, worked hard to be placed on the honor roll. There were also many suggestions for ways to improve the system. As for the principal, many faces and names were learned under very pleasant conditions. If for no other reason than this, the effort was worth it as seen from this perspective.

## VERBAL PRAISE AS A REINFORCER

by

Priscilla Coffman

Linthicum Elementary School

This study was undertaken to determine experimentally if verbal praise (approval) of desired behavior would increase the amount of such behavior in a group.

### STUDENTS

The students were two classes of kindergarten children, each on half day session. In the morning session there were fourteen boys and eight girls, in the afternoon session there were ten boys and ten girls.

### DEFINITION OF BEHAVIOR

After one hour of free play, children were told to straighten up the area in which they had been playing. When a child did not help, the teacher walked over to him and suggested a task he might do. Thus, prompts were frequently used. The data recorded was the time it took the class to clean up the room.

### BASELINE

Figure I (Baseline) shows the total number of minutes taken daily by the two kindergarten classes to straighten up the room. Baseline observations were taken during a five day period.

### REINFORCEMENT PROCEDURE

For five consecutive days the teacher gave verbal approval to any child who was actively cleaning. This was done five times randomly throughout the clean-up time. Figure 1 (reinforcement) shows the total number of minutes taken by both classes to clean the area during the five day reinforcement period.

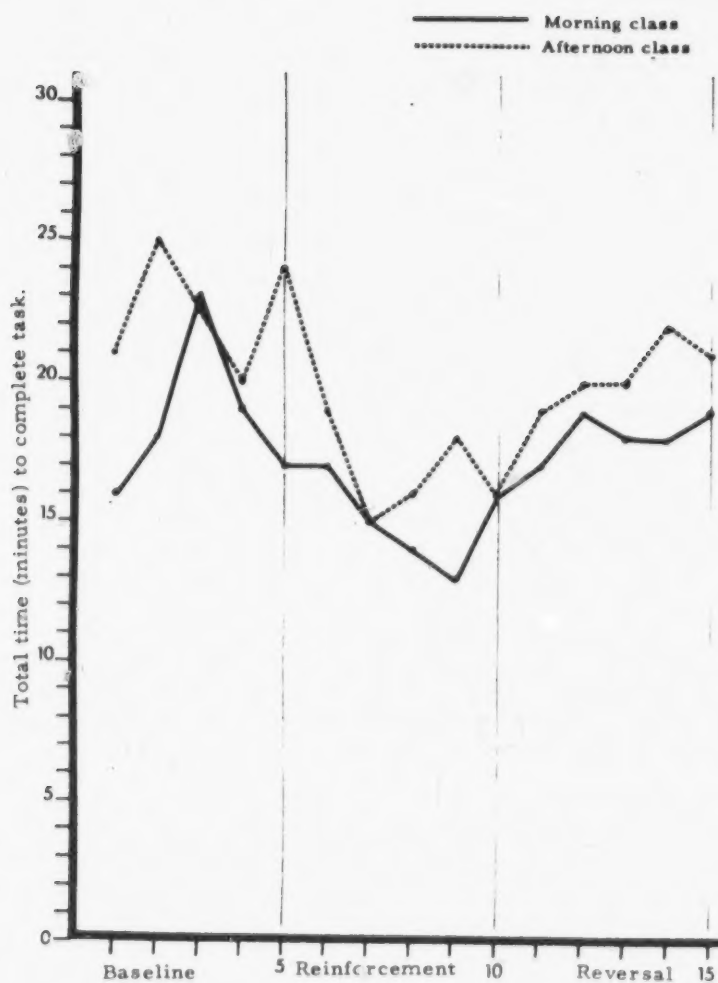


Figure 1. Total number of minutes taken by both classes to clean the area under baseline, reinforcement and reversal conditions. (dotted lines=morning class)

### REVERSAL

After five days of practicing the reinforcement procedure, the writer decided to go back to the original way of prodding the slower cleaners, rather than praising the actively involved children. Figure 1 (reversal) shows the total number of minutes taken by the class to clean up the room under reversal conditions. Reversal, according to Don Welch and colleagues at Hilltop is the return to conditions present when obtaining baseline data. (TEAM, Fall 1971)

### RESULTS

During the baseline time periods the children were slow in completing the task. When the desirable behavior of working was reinforced in the second (reinforcement) phase, the children worked eagerly for teacher attention and completed the task in a slightly shorter time. When the teacher reverted to encouraging the slow workers in the third phase, (reversal) the children were slightly disturbed and they roamed the room. It took almost as long for them to clean up as it had during the baseline period.

### DISCUSSION

The teacher's apparent inconsistency seemed to bother these kindergarteners and they spent quite a bit of time watching her in phase 3 (reversal) instead of doing the job. This shows the need for teacher consistency in reinforcement. In the first phase the teacher felt she was encouraging more work; in reality she was giving attention (reinforcement) to undesirable behavior. When the reinforcement of attention was given for desirable behavior, that behavior was increased and the time to complete the task was shortened.

Further research suggested by this study: Will the addition of more obvious reinforcers increase the desired behavior even more than verbal approval alone? Names might be written on board in addition to verbal approval given to a child actively cleaning the room.

10/11

USE OF TIME AND POSITIVE REINFORCEMENT  
TO  
MANAGE BEHAVIOR

by

Vimalae Barnes and Martha Moulden  
Central Avenue School

Robert Sutton and Vera Schaunfeld  
Anne Arundel Community College

A disruptive child is unable to learn and makes learning difficult for the other students. Behavior modification can be used to correct such disruptive classroom behavior.

THE STUDENT

Tray was a seven-year old first grader at Ralph Bunch Elementary School. At the time of this study, October, 1971, Tray was below the reading readiness level for first graders and was being considered a possible candidate for special education class. Tray's behavior was so extremely disruptive that learning could not take place.

DEFINITION OF BEHAVIOR

The behavioral goals of the program were to increase "On-Task" behavior and decrease "Off-Task" behavior. The academic goal was to reach the reading readiness level for first grade children.

The following were defined as disruptive behaviors (referred to in the study as "Off-Task" behaviors):

1. Hiding in the closet or puppet stage
2. Banging objects (i. e., pencils, ruler) on desk
3. Running around the classroom

The following were defined as "On-Task" behaviors:

1. Following directions
2. Remaining seated
3. Performing assigned academic tasks by himself and with others

#### BASELINE

Tray was observed for a total of one half hour (during two fifteen minute sessions) on Monday and Wednesday mornings. Reliability was obtained by having the two junior authors observing simultaneously. A score of at least 75% agreement was required to be considered reliable. Figure I illustrates the percentage of On-Task behaviors recorded during the four day baseline period. No measure of Off-Task behavior was obtained.

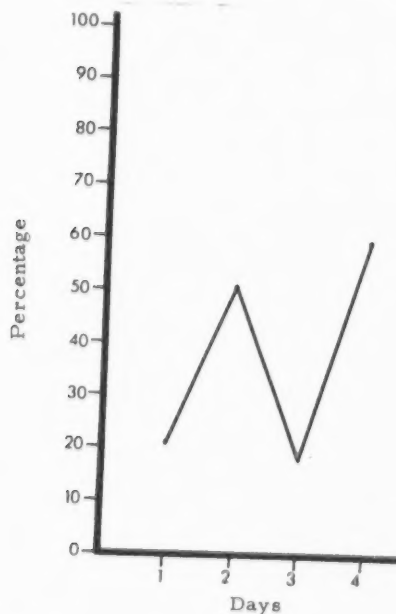


Figure I. Percentage of 'On Task' behaviors recorded during the baseline period.

REINFORCEMENT PROCEDURE

To extinguish the disruptive classroom behavior, a "Time-out" procedure was used. That is, Tray was immediately removed from the classroom for increasing periods of time whenever he was disruptive. Disruptive behavior (Off-Task behavior) has been defined as:

- a. Hiding in closet or puppet stage
- b. Banging objects
- c. Running around the classroom

When Tray was disruptive he was removed from the classroom and taken to an adjacent classroom of fifth graders where he was seated close to the teacher. The first time that he was removed he remained in the fifth grade classroom for five minutes. On each succeeding occasion that he was removed from his classroom, the time out period was increased by five minutes.

For On-Task, cooperative, behaviors, tokens were employed. An aide checked Tray's behavior every fifteen minutes. If Tray was On-Task, i. e., seated and performing assigned academic tasks, he was given one token. Eight tokens equaled one piece of candy. Tokens were "cashed in" at the end of the school day.

As the disruptive behavior was phased out, a program for achievement of academic goals was initiated. A small toy car was purchased and brought to the classroom. Tray was told that he could earn one point for each assigned task completed. Ten tokens equalled the truck. Social reinforcement such as praise, attention and affection were given for both non-disruptive behavior and academic behavior throughout the program.

Thus, reinforcement procedure included time out for disruptive behavior, and two token systems, one for sitting quietly and working, the other for completing academic assignments.

FINDINGS

Within a two week period, time-out was employed only three times; gross disruptive behavior had been extinguished.

On-Task behavior increased sharply as shown in Figure 2.

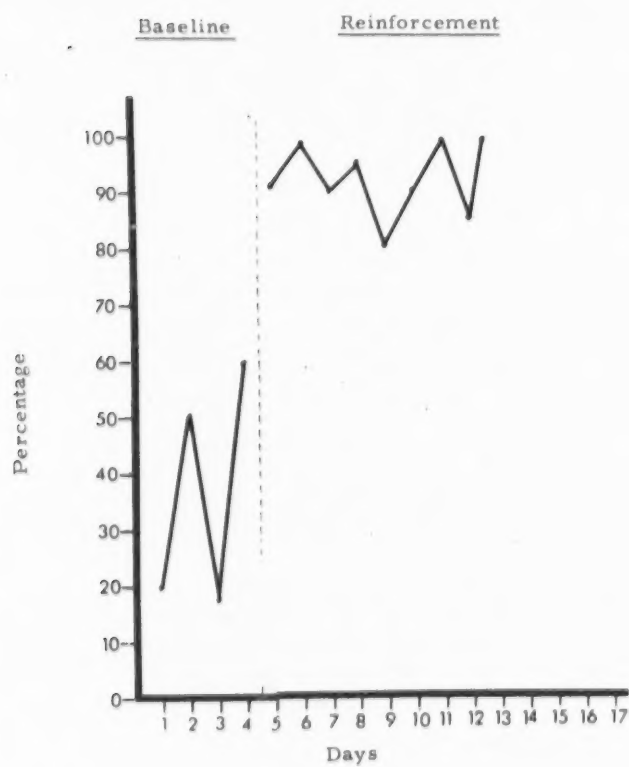


Figure II. Percentage of 'On Task' behaviors recorded during both the baseline and the reinforcement periods.

The second token system, employed to reinforce academic work, was also successful. In less than three weeks Tray earned his truck. This actually meant that he completed ten assignments within a three week period. This improvement was a significant step because within two months Tray was in a reading readiness program.

#### DISCUSSION

In the past, Tray's disruptive behavior had been reinforced by the attention of teacher aides. In this study, nondisruptive behavior was reinforced with attention, praise, and tokens, while disruptive behavior resulted in temporary removal from class. Although both procedures gave Tray attention, positive reinforcement was more effective. Once the disruptive behaviors were extinguished, Tray could begin to learn. At first, he achieved small successes and gradually tasks were made more difficult. When the program was ended, Tray was no longer a class problem and had successfully embarked on a reading readiness course. He was by then receiving only praise and attention for completion of structured academic tasks.

Subsequently, the school was relocated in another building, the structured academic program discontinued, and behavior problems reoccurred. With the reinstitution of the structured academic program, Tray is once again making satisfactory progress.

14/17

## ALL-CLASS REINFORCEMENT TO INCREASE ON-TASK BEHAVIOR

by

Joanne Corey

Davidsonville Elementary School

This study, an out-growth of a more extensive study to be published later, was initiated to see whether or not a teacher could increase the "on-task" behavior of the members of a whole class using a common reinforcer that would be easy to administer.

### THE CLASS

A heterogeneously grouped fifth grade (15 boys and 21 girls) was used for the experiment daily during their 25 minute daily spelling lesson.

### DEFINITION OF BEHAVIOR

"On-Task" behavior was defined in this case to mean:

1. Writing or erasing the spelling lesson
2. Pointing in the book, or otherwise demonstrating the lesson to another child

### BASELINE

"On-task" behavior was measured three times during each 25 minute period that the children had to do their pencil and paper work. These times were at five minute intervals and deliberately varied from day to day. At the specified time, the teacher scanned the room and noted how many student were on task. The students were not aware of the counting.

From these daily counts, percentages of "On-Task" behavior were computed. Eight class days were used to establish the baseline. Figure I shows the percentage of the class "On-Task" during this eight day period.

## ALL-CLASS REINFORCEMENT

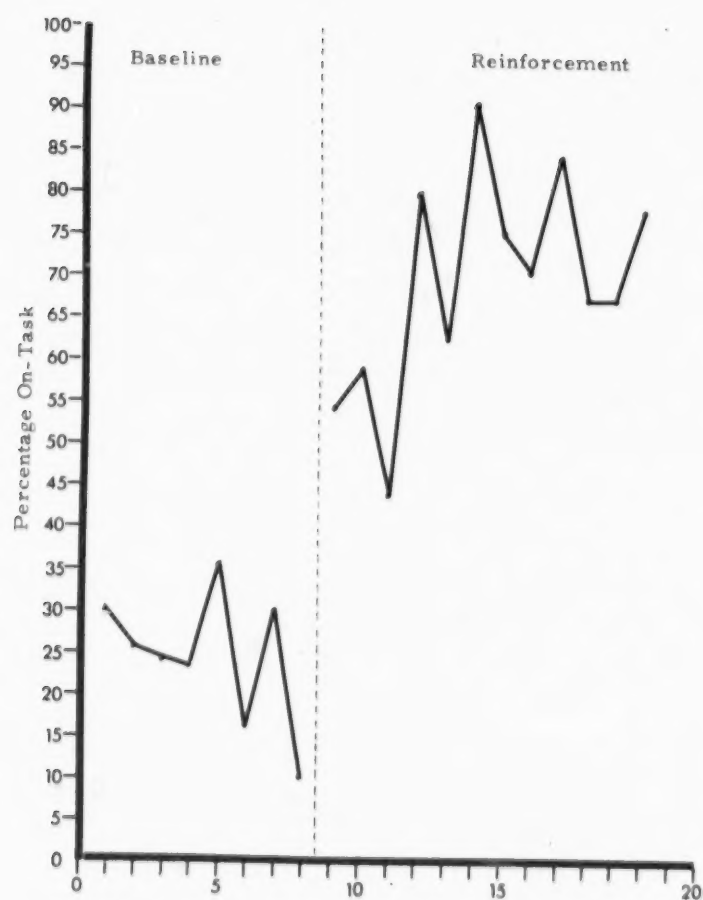


Figure I. Percentage of the class "On Task" during both the baseline and the reinforcement periods.

#### REINFORCEMENT PROCEDURE

On the ninth day the class was told that three times a day the teacher would make note of those students who were:

1. Writing (or erasing) or,
2. Working in the book on their spelling lesson.

The children were told they would not know when they were being counted. For every time seen working, each child would receive one point. Those children receiving three points for the day would be given stars to stick after their names on the "Working in Spelling" chart on the wall.

The principal visited the classroom every Friday morning. He noted those children who had earned three or more stars that week, called them individually to the front of the room, and congratulated them. Nothing was said to those children who had not earned three or more stars.

#### FINDINGS

Figure 1 shows the results of the study to date. The percentage of the class "On-Task" increased from an average of 24% at baseline to an average of 69% during the first 12 days of the experiment.

#### DISCUSSION

The study is being continued to see what effect the passage of time will have on this increase in "On-Task" behavior.

At this time it is not possible to pinpoint which of the reinforcers had the greatest effect on the behavior. It may have been the fact that the children knew they were being counted, the star, the principal's congratulation, or a combination of these. The study suggests possible ways for motivating an entire class to be more productive.

20/21

ELIMINATING DISRUPTIVE BEHAVIORS  
THROUGH  
CONTINGENCY CONTRACTING

by

William Brown, Philip Turner and John Haury, Learning Center, and  
Royal Thomas, Assistant Principal, Annapolis Junior High School

EDITOR'S NOTE:

This study is of particular importance in understanding the behavior of those students who, after being successful at the Learning Center, return to their local schools and begin once again to evidence the behavior that caused their removal to the Learning Center originally. Thus, we see the importance of the environment in producing and/or maintaining social and academic behaviors. In this case, when some of the Learning Center techniques were utilized in conjunction with the local school a cessation of disruptive behaviors causing referral to administration was achieved. The Learning Center can serve a double purpose; it can be a place where some students can go for direct modification of social and/or academic behavior; it can also be a valuable resource to public schools willing to incorporate effective behavioral technologies.

One method of decreasing the frequency of disruptive school behaviors is to reinforce incompatible behaviors. This study reports the technique used by two Learning Center staff members aided by a school administrator to eliminate the disruptive school behaviors of a former Learning Center student who had been sent back to a regular junior high school.

THE STUDENT

This student is a ninth grader who returned to a regular junior high school in September, 1971, after earning an Excellent Year

Certificate at the Learning Center the previous school year. While at the Learning Center, this student had emitted very few disruptive behaviors and had emitted exemplary working behaviors. However, data received on the Learning Center Follow-up Forms indicated this student was not succeeding either academically or socially since his return to a junior high school environment.

#### DEFINITION OF BEHAVIOR

Disruptive behavior was simply defined as any behavior sufficient to cause the student to be sent to the office of the Assistant Principal. It was hoped that if disruptive behaviors could be eliminated, improvement in academic work would follow.

#### BASELINE

Baseline data were collected through the Learning Center Follow-up. Forms mailed from the Learning Center and returned by this student's counselor at his junior high school. During September, 1971-January 19, 1972, this student was referred to the office 8 times for class disruption.

#### PROCEDURE

The objective was to eliminate referrals to the office for disruptive class behaviors. One possible procedure is to suppress the behaviors by delivering punishers. But all possible punishers including suspensions had been delivered and they had failed to suppress the behavior. The procedure used was to provide reinforcement for not being sent to the office for a week. The usual difficulty in this procedure is identifying a potential reinforcer which can be controlled. Since this student had enjoyed playing basketball at the Learning Center, he was approached with the following proposal: He would earn an afternoon game of basketball with two of the authors on the week-end, if he passed the criterion of not having been referred to the office for disruptive behaviors during the previous school week. This student indicated that the proposal was to his liking. Thus a potential reinforcer was set up whose delivery was contingent on not being sent to the office by classroom teachers.

The remaining task in such a procedure is to monitor the rate of referrals to the office. Arrangements were made to contact the Assistant Principal by telephone each Friday afternoon. He agreed to have a record of the number of times, if any, that the student was sent to the office that week.

FINDINGS

The arrangement lasted for 7 weeks. Figure 1 shows a graphical presentation of the number of referrals to the office for disruption behaviors during the baseline and agreement periods. This graph also indicates the occurrence of suspensions. These data show that the referrals to the office for disruption were eliminated once the agreement was in effect.



Figure 1. Number of referrals to the office for disruptive behaviors during the baseline and agreement periods.

DISCUSSION

The data indicated that contingency contracting between the administration, student, and out-of-school personnel was a useful reinforcement procedure to help control undesirable behavior resulting in referral to the office. The hope that academic progress would accompany the elimination of disruptive behaviors did not materialize. The behaviors reinforced seem to have been academically unproductive, although they were non-disruptive. For example, sleeping in class might have been reinforced since it did not lead to office referral. This may indicate a limitation in any reinforcement procedure which does not involve a student's actual academic effort.

It also appears that the punishing consequences of office referrals, calls and letters to parents, parent conferences, suspensions, and threatened expulsion, were less effective in decreasing this student's disruptive behaviors than the contingent delivery of a positive reinforcer.

The intervention and consultation in this case is an example of a new part of the Learning Center Follow-up Program. This consultation is available for any student who has been transferred to a regular school on the recommendation of the Learning Center.

## CONTINGENCY CONTRACTING WITH FIFTH GRADERS

by

Leslie E. Peters

Cape St. Claire Elementary School

This study was undertaken to test the effectiveness of a contingency contracting program with a group of above-average students.

### THE STUDENTS

This study was done with an advanced group of fifth grade students. At least 80% of them worked at exact grade level or above. The rest worked at beginning fifth grade level or less, in reading and math. These students had previously demonstrated the ability to work independently.

### DEFINITION OF BEHAVIOR

The following behaviors were required from each student:

1. Select one of four types of news stories, identify it and locate an example of it in a newspaper.
2. Point out the parts of a given newspaper and list them as they appear.
3. Write a headline and leadline for a news story, each being no longer than five and ten words respectively.

### BASELINE

During the first week of the study the objectives (listed above) were given to the students verbally. Each child was checked at the end of the allotted period in order to determine if he had completed the three objectives assigned. Graph I shows the number of students who completed each objective during the baseline week.

#### REINFORCEMENT PROCEDURE

The first day of the second week, students were given the same assignments, but this time the objectives were given to the students in writing, in the form of a contract. The contract specified that upon completion of each of the three objectives the student would earn one of the following privileges:

1. Free time in the classroom
2. Use of the learning station of choice
3. Going to the library
4. Working on a special project
5. Playing a quiet game with a friend
6. Use of special books or materials

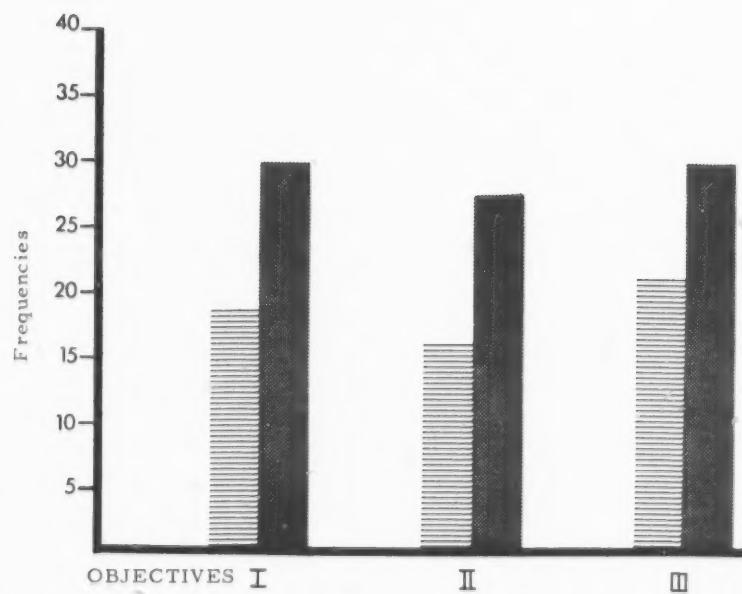
In order to obtain the above privileges, the student checked his own assignment and brought it to the teacher for approval.

#### FINDINGS

Graph I shows the difference between the number of students completing each of the three objectives during both the baseline and reinforcement stages.

#### DISCUSSION

The children worked rapidly during the intervals that they completed objectives. It appears that contracting was an efficient technique in terms of objectives completed. One of the reasons that this approach was so markedly successful may have been the variety of reinforcers available to the class. The students enjoyed this system, and it has been extended to cover other subject areas.



Graph I. Total number of children who completed objectives I, II, III, under both baseline and experimental procedures. Black bar represents REINFORCEMENT, Shaded bar represents BASELINE.

## MINI-INSERVICE DATA

1. Bel Air Middle School      8 Elementary School Counselors
2. Homestead Elementary School 6 Teachers, principal, assistant principal
3. Joppatowne Elementary School  
9 teachers, assistant principal, 2 secretaries
4. Perryville Elementary School  
7 teachers, principal, counselor
5. Bayview Elementary School   8 teachers, counselor
6. North East Elementary School  
9 teachers, counselor, speech therapist

C L A S S R O O M  
C L A S S R O O M

A P P L I C A T I O N S  
A P P L I C A T I O N S

OF

R E I N F O R C E M E N T  
R E I N F O R C E M E N T

T H E O R Y  
T H E O R Y

HARFORD - CECIL SUPPLEMENTARY EDUCATION CENTER

The following vignettes were prepared by teachers, counselors, and other school personnel at the completion of an In-Service course in Behavior Modification and as a result of individual consultations with the staff psychologist from the Supplementary Education Center, Mr. Ken Winer, and/or the behavioral consultant, Mr. Mike Boyle.

The efforts of the teachers and counselors in assimilating the course material and later applying this knowledge in the classroom was very impressive. Their primary source of motivation for doing all this additional work was their concern for the well-being of their students -- no one received extra credit, money, or compensatory time.

In order to further the understanding of Behavior Modification, several of the teachers agreed to author the following studies for inclusion in this issue of CART (Classroom Applications of Reinforcement Theory). CART will be distributed to teachers, counselors and administrators who participate in future courses offered by the SEC in Behavior Modification. CART is also available upon request from the SEC to any interested individuals or agencies.

Any recommendations you, the reader, might have for changing future issues would be greatly appreciated.

Michael L. Boyle  
Behavioral Consultant

Kenneth S. Winer  
SEC Psychologist

The purpose of my trial practices was to modify the poor attention and lack of good classroom habits in a low level reading group.

There are nine children in the group. One does not read at all, two are very slow readers, one has developed an "I don't care" attitude about everything to do with class work, and four are working hard. All are working on a 2-2 book.

Their behavior was due, I am sure, in part, to their inability to achieve. Since I am more or less bound to stick with the book, I can only try to get their closest attention and to have this attention during the entire time when I am working with them.

#### PROCEDURE:

1. I go over the new vocabulary with the children. I write the words on the board and tell them what the word is. We spell the word and repeat it together. I spread out cards upon which the words are written (the board words are in manuscript print). By raising his hand and waiting to be called upon, a child chooses **any** card he can match with a word on the board and he must be able to use this in a sentence. If he does this correctly, he may keep the card and I make a check by his name on my list. If the wrong card is chosen or the child cannot use the word in a sentence he loses the card and I note a O. At the end tallies are made and stars given to those who have at least one card in their possession.
2. The children are told what pages to read silently and are directed to watch for the answer to some question that they can find on the pages they read. They are also to formulate a question about the material they read. For answering my question correctly, they earn the right to read first. For answering the questions that their peers make up they gain a check mark in my book. They may call upon anyone they think can answer their question except the boy who cannot read at all.
3. I have them begin reading orally, choosing the child who answered my question on the silent reading first. I break into the oral reading in the middle of paragraphs and call upon any child in the group. If he can continue a check is made--if he cannot find the place and I am sure that he knows the first word and is not hesitating because he does not know the word I have "caught him" and he loses his turn to read and a O is placed after his name. Each child usually gets to read at least three times. A desk seal is given to the entire group if the lesson has been orderly and there are three times more checks in my book than there are O's. This is the "magic formula" arrived at in the beginning of setting up this modification. Later I will change the formula to four times the O's.

#### PROFITS:

And I prefer to call them this--have been great. My two readers who have been doing so poorly are trying very hard and are seeking help with vocabulary from some better readers. The girl whose attitude has been so poor still has a poor attitude

M. L. Benway  
Youth Benefit Elementary

but she has been making a greater effort to stay with the group in oral reading because the group has been angry with her when she loses the place. (She is waiting admittance into training school and is a problem far beyond my powers to correct.

#### ADDED INCENTIVES -- Spelling

I make a chart at the beginning of the year that has written on it "There are 32 spelling lessons in our book. Each time you make an A on a spelling test you may cut off one inch of the long tail of your spelling bee."

Each child has a long strip 32 inches long on a bee that has their name on it. The shorter the strip, the better the speller. A prize will be given to the five shortest strips at the end of the year.

Each child has a spelling word bank book. It looks like a real bank book with close lines and the child's name on the cover. When I give the regular spelling test I announce five bonus words at the end of the test--not to be counted toward the test grade. These words may be very difficult--then they are worth fifty cents, if they are easy words they are worth five cents. The words are everyday words that the children may come in contact with in their reading work, science, social studies or class discussion. They may pertain to a current holiday or anything the child knows something about. When the test is graphed, the amount "earned" in bonus words is also put on the paper. The child puts down the date, the money he "earned" and the running total. The first five who get five dollars are given a special prize--in this case a bag of gold (chocolate dollars). At the end of the year anyone with five dollars will be given recognition and a prize and the others will be given a treasure to divide.

I sometimes call for the word books when we are waiting for lunch or to go home. Then the words are spelled orally. I stop the child as soon as he makes a mistake and call upon someone else--this gives a clue as to the spelling of the words but the value of the word also goes down--I begin at fifty cents and drop the value five cents until the word is spelled correctly. The child then enters the money he earned in his book.

Another thing that has put zip into our spelling lessons this year--I told the children that if they made an A (and this means every word spelled correctly) on Wednesday's practice test they would not have to take the final test on Friday. At the mid term I further announced that if they made an A on the first time around (Wednesday) they would not have to do written homework the following week. The youngsters who escaped homework soon learned that to get the A they had to study so I had no problems.

EDITOR'S NOTE -- Mrs. Benway's description above of the various ways in which she is using Behavior Modification Principles are very good examples of the "common sense" approach to motivating students in the classroom.

Mrs. Eyre  
Youth Benefit Elementary

Once a week twenty-eight children are in the library for a thirty minute period. One student is reading at two levels above grade level; fifteen reading on grade level; nine reading slightly under grade level; and three poor readers.

Approximately 1/2 of this class was not interested in getting a book from the library or reading any material; consequently, they got in groups to talk or horse around annoying the teacher and other students who were trying to read.

AIMS:

- (1) To encourage reading by giving poor readers an excuse to read an easy book.
- (2) To try to omit behavior problems by keeping students interested.

The librarian made arrangements with primary level teachers for some of their students to read a story to the class at approximately 1:40 on Thursday afternoon. All students in low groups were assigned a teacher. They selected a book suitable for the class they were to read to, and read it to themselves. The books were put in a special place off the shelves. The following Thursday, the student picked up his book, read it over, and then went to the assigned classroom. When they returned to the library, they returned that book to the shelf and selected another for the next week.

Students were assigned checks next to their names for talking without permission or "horsing around" (e.g. throwing paper, getting out of seat, etc.). If any student received three checks beside his name, he did not read to a class that day. No student reading ever had any checks. All students except two were very interested; however, with all their friends out of the room, these two now get a book or magazine to read. The first week one of the very low level readers would not participate, but asked for an assignment the following week. I was extremely pleased with the results, especially with the low level reader who is showing much more interest in reading.

DECREASING THE UNDESIRABLE BEHAVIOR OF A HYPERACTIVE  
SECOND GRADE BOY

Miss Carpenter  
Riverside Elementary

SUBJECT:

Jim was a very noisy hyperactive seven year old child whose ability is above average. He seemed compelled to be constantly active. He would finish assignments with speed and accuracy but disturbed others in the process by frequently acting like a clown to get attention, thereby feeling he was a leader.

SITUATION AND PROBLEM:

Since reprimanding only seemed to reinforce his negative behavior (apparently he was misbehaving for attention), I decided to try the positive approach.

Jim and I discussed his problem and he was receptive to the idea of change in his conduct. It was decided he was to have ten stars on the board in the morning and ten in the afternoon. Each time he called out in class, hit someone or got out of his seat without permission, one star was erased. If he had two stars left by 11:30, the whole class was allowed an extra ten minute free play period. These same rules applied in the afternoon.

Jim also received verbal praise periodically during the day for good behavior. He was also offered the reward of staying after school to help the teacher clean the room, when he had successfully reached the desired goals for the day.

RESULTS:

Jim responded favorably. After four days he seemed so well behaved that on the fifth day, he said he didn't need any stars.

He is not always successful when trying to be good but that's to be expected. Some days he feels the need for stars and puts them up himself.

After this study, I am convinced that positive reinforcement is more effective (for most children) to help the child toward self-discipline.

Kay Murphy  
Youth Benefit Elementary

BEHAVIOR:

Jerry disturbs the class by talking aloud during class, falling off his chair to attract attention, throwing temper tantrums, and being disrespectful to any authority figure.

SPECIFIC BEHAVIOR:

Jerry's behavior about talking aloud to others without permission was pinpointed.

APPROACH:

1st Day: Jerry was told that for every 15 minute period that he would not disturb his classmates he would receive a slip of colored paper. At the end of the first day he was to count the slips of paper to determine his success.

He was good all morning. After lunch he gave up and continued his previous behavior (but did not seem to be quite as disruptive as other days). He counted his slips at the end of the day and as an extra motivator he was given a caramel for every 5 cards. He received 3 pieces of candy.

2nd Day: \*Jerry was told that the next day would be a little different. He received a slip of paper for every 15 minute period that showed good behavior but lost a slip of paper if he did not achieve well during that span of time. He received only 1 piece of candy. (This could be varied to meet the needs of the child. It would not be necessary to use candy.)

The success of this approach cannot be fully determined since it has only been in use for two days. However, it seems to the teacher that he is trying to improve his behavior and does better in all areas (including written work.)

\*EDITOR'S NOTE: This is an excellent procedure not only for the student, but also for reminding the teacher to give recognition to desirable behavior -- this may have been a bit soon to change the system, it is generally advisable to continue with one system until you get two or more days of fairly consistent results.

The reason for undertaking such a task was due to the concern of a parent over her child's behavior and actions. After discussing the situation with Mr. Winer from the Supplementary Center, I felt strongly that whatever was to be done should be done on a whole class approach rather than singling out one or two students. There were certain children in my class who should not have been grouped together in one room. However, that had been done and it was my responsibility to make it a workable classroom situation in order for some amount of "intellectual" growth to occur.

My children were very eager participants; too eager! They were constantly interrupting either myself or their classmates by shouting out whatever was on their mind rather than waiting to be recognized by raising their hand. Since this was the most annoying behavior for me, it became my major target for change.

A chart was constructed with each child's name down the side and three ways by which they could earn checks (raising hands, doing seatwork quietly, taking seat after break). Points were given randomly throughout the day and positive behavior was praised.

Before the chart was constructed a record was kept each day of the number of times that calling out occurred. It averaged out to about 65 times per day. When I initiated the chart the calling out dropped drastically. I also began giving praise to those who raised their hands for recognition. The average number of times of calling out dropped to about 25 times per day. With the suggestions of the students, a list of rewards was established:

- |                                                   |                                           |
|---------------------------------------------------|-------------------------------------------|
| 1) 15 minutes of free time                        | 4) 15 minutes to read magazines and books |
| 2) 15 minutes in the library                      | 5) 15 minutes of art work                 |
| 3) 15 minutes to watch filmstrips and/ or records | 6) 15 minutes in the gym                  |

The 15 minutes of free time in the gym was not begun until after Easter. Until that date the reward chosen most often was 15 minutes of free time in the library. That is of special interest since many of my students had reading disabilities. When the gym reward was added, several students who had not cared about winning before suddenly were striving to earn checks.

The week following our return to school after the spring vacation, I did not continue with what I had been doing previously and to say the least, life was hectic! There was constant calling out, bickering and no effort put forth in scholastic subjects.

You can be sure that I returned to the chart and reward technique the next week and for the remainder of the year. There was an observable change in behavior and attitude of many of the pupils. Being as objective as possible I feel that there was only one student who did not benefit from this activity in a positive manner. He tried once in a great while to earn a reward but I suppose the incentive just wasn't great enough because he was quite a disturbing influence throughout the year.

Joyce Davis  
Havre de Grace Elementary

Working with behavior modification has certainly shown me what can be done with a little bit of effort and concern. I've seen some of my children's attitudes change because they were given a chance to succeed -- even the slowest in my class could raise his hand -- and they were told someone cared about them -- that someone being their teacher. Comments have been made by others -- the principal, supervisor, music teacher, physical education teacher -- about the positive change in the class' general behavior.

### BEHAVIOR MODIFICATION

I became a fifth grade teacher of twenty-seven pupils at mid-year. Of these, thirteen were reading in a fifth grade reader, eight in a third grade reader, and six in a second grade reader. I only mention reading levels to possibly explain, in one way, the reason for both lower groups discipline and academic problems.

At the time when I became their teacher they were quite convinced that I would not survive my two predecessors. They had very low self-concepts and felt that they could not be trusted as individuals or as a class. In special classes such as physical education, music, and library they were problems because so much time was spent trying to achieve quiet and order. During restroom breaks it was difficult to maintain order and many physical fights were a result of their breaks. Another class difficulty was working cohesively in the afternoon. And their general academic achievement was low.

There were also individual difficulties. A few members of the class could not work independently for any extended period. The major offenders were Anne, who also had a negative school attitude problem, Sam, who lacked self-discipline and enjoyed entertaining the class, and Denise, who was constantly in the art drawer. Donna and Allen had great difficulty in keeping their hands to themselves in both the regular classroom and physical education classes. Charles constantly sucked his thumb and he and Sue were both frequently ostracized from the group. Karen was the leader of a group of girls who threatened physical abuse to anyone who happened not to be in her favor at any given time. Her sister Denise would sit in the back of the room making tiny paper cut-outs of tableware. Laura was a hypochondriac who felt ill regularly before any task or special class she did not particularly enjoy.

A program of positive behavior modification was suggested by Paul Ouellette, pupil personnel worker, and Ken Winer, psychologist at the Supplementary Education Center. Remembering that one of my college professors stressed that any behavior which you wish continued you must reinforce with attention, affection and approval, I decided to institute such a program with my class. However, before we began our program I pre-tested the idea. I counted the number of times in one afternoon that I had to remind the class to be quiet, remain in their seats, listen to the lesson, etc. The mean I obtained for the week was twenty-three times during the afternoon sessions. To further test the acceptability of the program, I noted the favorable response of the class to sincere positive praise. There was a marked improvement in behavior of individuals with discipline problems in order to receive my attention. I decided to begin the program after noticing the positive changes not only in pupils but also myself. I was no longer leaving school as frustrated and exhausted.

I spent a few evenings reading studies compiled by classroom teachers of their own experiences with the program. Then I introduced the concept of a "Token Economy" to my class. They responded favorably to receiving paper bills labeled "One Token" and initialed by myself. They could be "cashed-in" daily for items on our menu. Combining their suggestions with my own ideas of acceptable rewards, we derived a basic menu which was the following:

Joyce Bishton

|                             |           |                              |           |
|-----------------------------|-----------|------------------------------|-----------|
| Candy                       | 4 tokens  | Work on posters              | 3 tokens  |
| Cookies                     | 4 tokens  | Opaque projector for tracing | 10 tokens |
| View Filmstrip              | 4 tokens  | Cartoon to trace             | 3 tokens  |
| Coke (ten cents also)       | 10 tokens | Go to school store           | 2 tokens  |
| Pick up litter              | 5 tokens  | Empty trash                  | 1 token   |
| Go outside                  | 7 tokens  | Use stapler                  | 1 token   |
| Colored chalk               | 5 tokens  | Art paper                    | 1 token   |
| Work on bulletin board      | 10 tokens | Use magic markers            | 1 token   |
| Listen to record (head-set) | 5 tokens  | Use scissors                 | 1 token   |
| Early to lunch (five min.)  | 5 tokens  | Painting                     | 10 tokens |

I would also scavage at home for interesting articles for our daily auction. They would bid for such items as artificial flowers, old wallets, pens, pencils, magazines and Charlie Brown articles. They thoroughly enjoyed the novelty and diversity of the auctions.

Also the weekly jobs such as taking the attendance card to the office, getting and returning audio-visual materials, checking for clean desks, etc. went to the highest bidder.

At the on-set of the program the demands are great. The purpose of such a program is to reinforce at every opportunity some desired positive behavior which you wish continued. I spent much time at first just rewarding my pupils. And to combat their resentment when something positive they did went unrewarded, I simply explained that I would not be able to notice every time they engaged in some constructive positive behavior, but that eventually I would notice and reward them.

I must emphasize that initiating such a system is not an easy task, but the rewards are great. The results, I feel, definitely out-weigh the work and demands involved. Each evening I left school with a more positive attitude toward the days activities and the next. The children thoroughly enjoyed the prospect of what they would be able to receive during "cash-in" time. It gave them something tangible to work toward.

They also realized that the tokens were difficult to earn and easy to lose. I not only rewarded good behavior, but whenever necessary (for repeated disregard of our basic rules) confiscated tokens. This act was not totally positive, but it was not feasible to reward everyone in the class except the person causing the disturbance.

I began also reinforcing academic achievement. Each morning before class began I would check for homework assignments and award tokens on a predetermined scale. In the beginning only the completion of each task was checked. Later emphasis was placed on the correctness of each assignment. There was a marked improvement in the number of assignments which were completed in contrast to before the institution of the program. Before the program only ten people regularly completed all assignments. This figure increased to fifteen with the remainder of the class completing at least one portion of each homework assignment.

Joyce Bishton

As the behavior of my class improved, noticed by myself and others, I began decreasing the amount of tokens awarded for behavior and increasing the amount for academic achievement. Only one mention was made in regards to the phasing-out of behavioral tokens and that was made by Sharon. She asked "why the class was not getting tokens for being good?". We discussed the matter and she agreed that people are not always rewarded every time or even often when they are good. She also remarked that her good behavior was noticed at home.

Tokens were also used to maintain orderly desks. Daily one of my pupils would issue "Dirty Gertie Awards" to those with messy desks. Each award had to be returned with three tokens.

Unfortunately, the entire program will be gradually phased out by the last two weeks of school to prepare the class for the real situation that they will encounter next year.

Observable group and individual behavioral changes were made. The special area teachers noticed and remarked about the positive change made in the attitude and behavior of the group. Restroom breaks take place now without major incidents and the frequency of minor problems has greatly decreased. They work cohesively and productively during the afternoons with greater consistency. Academic achievement is greater as evidenced by the contrast between the last two marking periods and class participation. The children themselves noticed a more relaxed and productive climate in our room.

Individual positive changes were seen by the decrease in frequency that Sam, Anne, and Denise left their seats. Donna and Allen demonstrate greater self-control. Charles and Sue are no longer outwardly ostracized by their peers. Karen no longer threatens individuals. Laura has not refused to complete a task or attend a special class due to illness for the past month.

I think one major factor must be kept in mind while dealing with positive behavior modification. In the four months of working with our program there have been slight but significant changes. Such changes were not achieved through ten years of negative reinforcement. These changes might have even been greater if such a program was protracted over a longer period of time. Each child needs the opportunity which he deserves.

In order for such a program to succeed the teacher must first be willing to finance the entire reward system and also have the total cooperation from the administration.

Joyce Bishton  
Meadowvale Elementary School

MY EVALUATION OF BEHAVIOR MODIFICATION  
AS CONDUCTED IN ROOM 20

Meadowvale School

Not being steeped in psychological jargon -- or for that matter psychology itself -- my observations are completely from a practical standpoint.

Prior to the introduction of Behavior Modification, Room 20 had managed to drop one permanent teacher and a raft of substitutes. Being the Assistant Principal, and one who calls substitutes, my concerns over Room 20 were obvious. The Administration of Meadowvale was almost at the brink of sending the hard-core troublemakers to the remaining fifth grade classes.

Mrs. Joyce Bishton, a secondary Spanish and Russian teacher by degree, was hired and the problems of Room 20 began to diminish. In my associations with her, she explained to me about her meetings with our county's Supplementary Center psychologist, Ken Winer. To my knowledge, this was the format developed which led to her most successful program.

Prior to Behavior Modification, these children, in general had little respect for authority, were ill-mannered, undisciplined and had a very poor or negative out-look not only on school life but also life itself.

The program brought almost immediate observable results -- perhaps not long-standing for some, but much of the negative behavior could certainly be seen as declining.

I would like to say that this program was followed by Mrs. Bishton for about four months. One could not possibly expect this program to completely alter the behavior of children who were negatively reinforced for practically their entire lives.

Paul. E. Bowman, Jr.  
Assistant Principal  
Meadowvale Elementary  
Havre de Grace, Maryland

AN EVALUATION OF THE CHANGES IN PUPIL  
BEHAVIORS IN ROOM 20, MEADOWVALE ELEMENTARY  
SINCE BEHAVIOR MODIFICATION HAS BEEN USED:

I have been vaguely aware of the behavior modification program being used in Mrs. Bishton's fifth grade class, but since I have not observed its methods and system, I can only evaluate the change in the behavior of the class, not whether behavior modification is successful.

The entire class was suffering from emotional stresses caused partly by previous teachers and lack of a teacher. As soon as Mrs. Bishton began teaching the class, they became more of a unit under her leadership. The class is no longer being led by the children who were loud and unruly. The children who were most disruptive are now the most attentive. These same children appear happier and less troubled. They seem to know what is expected of them, and as long as the material presented to them is interesting, they are willing to move ahead.

The lower achievers in the room still find it difficult to sit still for very long and sometimes cause the whole class to become involved in their antics.

I am very pleased with the changes I have observed in Room 20 since Mrs. Bishton became their teacher. They are much more enjoyable to work with since they have learned to meet challenges and accept and conquer them.

Susan Wollon  
Vocal Music Teacher

## SPECIAL EDUCATION CONSULTATION

## SUMMARY

Charles County: 4 Day Care teachers  
4 aids  
8 social service workers  
10 Public health nurses

St. Marys County:  
4 Activity Center Teachers  
3 Day Care Teachers  
2 Aides  
2 Public Health Nurses

Calvert County:  
7 Special Education Teachers  
6 aides  
1 School Psychologist

2.7.7 Regional In-Service Training

for Adult Activity Centers,

Spring 1972

REGIONAL IN-SERVICE TRAINING FOR ADULT ACTIVITY CENTERS

SPRING, 1972

Great Oaks Center

THEORY AND PRACTICE OF LEARNING  
TRAINING IN BEHAVIOR MODIFICATION

1. March 16: Creating and defining individual and program goals.
2. March 23: Identifying success and failure.
3. March 30: Understanding the conditions of learning.
4. April 13: Analyzing and creating motivation.
5. April 20: Freeing students for better opportunities.
6. April 27: Bringing learning into contact with the real world.
7. May 4: Bridging the gap and telling the difference.
8. May 11: Learning the new from the old.
9. May 18: Learning by watching.
10. May 25: Creating a powerful learning environment.

REGIONAL IN-SERVICE TRAINING FOR ADULT ACTIVITY CENTERS

Spring, 1972

Great Oaks Center

THEORY AND PRACTICE OF LEARNING

TRAINING IN BEHAVIOR MODIFICATION

Assignment 1:

1. Select one segment of the program in which you work. Describe all the goals of this segment in specific behavioral terms.
2. Select a student in your program and identify a behavior which you consider important to change in some way - increase, improve, decrease or remove. Describe in detail both the present behavior and the behavioral goal.

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Great Oaks Center

THEORY AND PRACTICE OF LEARNING  
TRAINING IN BEHAVIOR MODIFICATION

Assignment 2:

1. Describe the most effective way of measuring the behavior you selected for change in assignment 1. Identify the method, the unit, and the specific behavior to be measured.
2. Begin a permanent record of this behavior with a baseline measurement beginning tomorrow. It will be reviewed next week.
3. Describe the behavior of a student which is best measured by event recording and record it for a day (or 1/2 day if it occurs frequently).
4. Describe the behavior of a student which is best measured by duration recording and record it over a period.
5. Describe the behavior of a student which is best measured by interval recording and record it for five (5) minutes.
6. Describe the behavior of a student which is best measured by time sampling and record it for 1/2 a day.

# Ways of measuring behavior through observation:

1. Continuous record - diary.
2. Direct measurement - number of finished pieces.
3. Recording events - number of times the behavior occurs in a specified period of time.  
ex. 9:00-9:30 1111 11 3:00-3:30 1111
4. Duration - amount of time a behavior occurs during a specific period of time. (Usually requires a stop watch).  
ex. 9:00-9:30: 8' 45" 3:00-3:30: 14' 25"
5. Interval recording - does the behavior occur within certain intervals (usually short).

|           |   |    |    |    |    |    |    |
|-----------|---|----|----|----|----|----|----|
| Seconds - |   | 10 | 10 | 10 | 10 | 10 | 10 |
| Minutes   | 1 | X  | X  |    | X  |    |    |
|           | 2 |    | X  |    | X  | X  | X  |
|           | 3 |    |    |    |    |    |    |
|           | 4 |    |    |    |    |    |    |
|           | 5 |    |    |    |    |    |    |

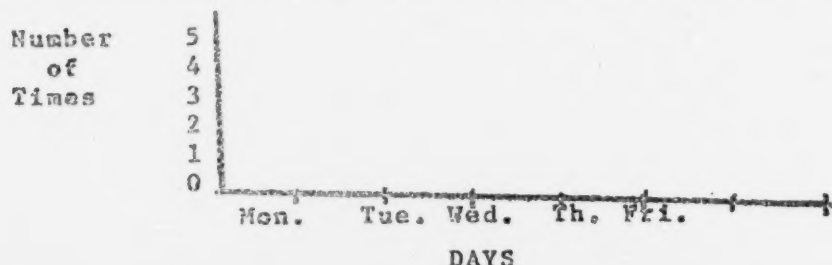
6. Time sampling - is the behavior occurring at the end of a given period?

ex. 9:00 - X 10:00 - 0  
 9:15 - 0 10:15 - 0  
 9:30 - X 10:30 - X  
 9:45 - X 10:45 - 0

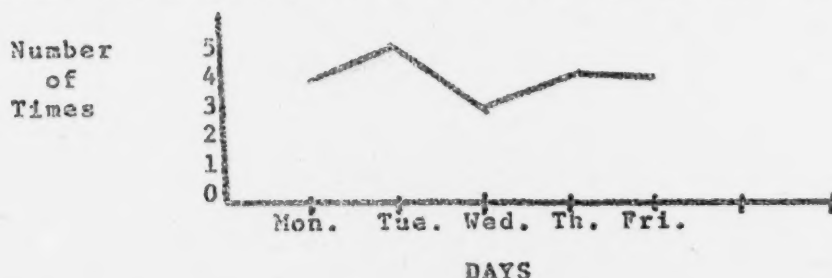
## GRAPHING

(or how to make keeping behavior records interesting and fun)

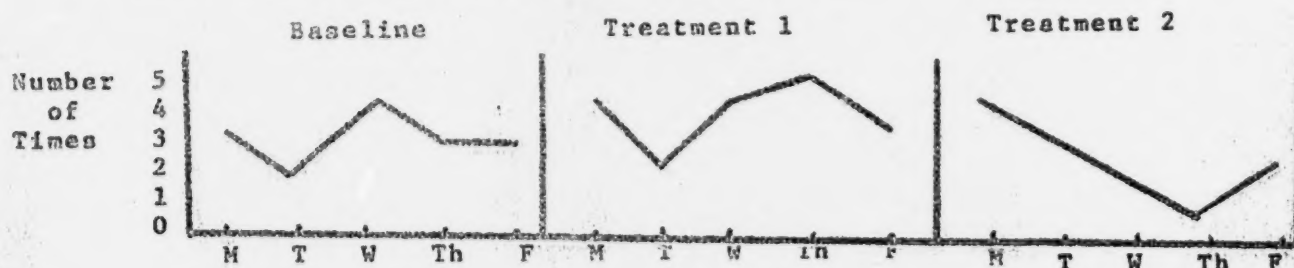
A graph is a living picture - because it shows you at a glance what has been - and is happening. Its living because it changes every day. Making and keeping a graph record is easy and fun. To make one, just draw two lines at right angles to each other - designate the bottom, horizontal line to describe time (hours, days, weeks, etc.) and the left-hand vertical line to describe the frequency of the event.



At the end of each day (hour, week, etc.) put a mark over that day and next to the number of times the event occurred. If you connect the marks you have a picture of the frequency of the behavior.



If you then draw a vertical line every time you change what you are doing about that behavior you can see what effect your efforts have had.



Baseline is the original count we take before we try to change the behavior. Now we can see what changes have occurred.

See John. See John run. Count John running.  
Counting John running is fun.

See John. See John Stop. Count John stopping.  
Counting John stopping is more fun.

See John. See John sit. Count John sitting.  
Counting John sitting is the most fun of all.

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GREAT OAKS CENTER

THEORY AND PRACTICE OF LEARNING  
TRAINING IN BEHAVIOR MODIFICATION

Session 3: Understanding the Conditions of Learning

Consider the relationship between the preceding event or environment, a given behavior and the succeeding event or change in the environment.

What are the significant aspects of relevant antecedents? Antecedents have the effect of limiting or permitting, inviting or discouraging. The behavior occurs in the context of the antecedent conditions, both those that are deliberate and planned, and those that are accidental.

The deliberate manipulation of antecedents requires that they be clear and consistent. Most significant is that they have a history of being directly associated with the behavior and the consequences.

Consequent events will have effect on the subsequent probability and frequency of the behavior. The accidental occurrence of events following a given behavior can cause peculiar or superstitious behavior.

Deliberate manipulation of consequences also requires that they be clear, consistent and directly related to the behavior that is to be influenced.

The analysis of existing and possible A B C'S is crucial to effective teaching and relevant programming.

THEORY AND PRACTICE OF LEARNING  
Training in Behavior Modification

Session 4: Analyzing and Creating Motivation

What does motivation really mean? When we speak of motivating someone, we usually think of helping them to want to do something. So the key to motivation is - What makes people want to do things.

It is clear that we must study what are the consequences of actions to establish motives. Certain consequences have the effect of causing behaviors to increase and others do not. How do we decide what is a reinforcer? Reinforcers can be classified as edible, tangible, activity, social or token.

How can we create or increase the power of a reinforcer? Important factors are association with other reinforcers, association with reinforcing persons and using a state of deprivation.

An important dimension of using reinforcement is it's relationship to antecedent conditions. These can be used to announce the availability of a reinforcer for a given behavior.

To effectively use reinforcers to maintain or increase a behavior, the reinforcer should be immediate, frequent, fair, clear, consistent and specific. Reinforcers should also reward accomplishment rather than obedience. They should be made contingent upon the behavior and be delivered after the behavior. The behavior which is to be reinforced must represent a small, achievable step for the person.

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Assignment:

1. Begin treatment of the case you have selected. Continue keeping a record of the behavior.
2. Select from the students with whom you work, an example of each of the five classes of ~~REINFORCERS~~ Reinforcers.
3. Take each of these five examples and give an illustration of how they could be used to change or increase a specified behavior of that student.
4. Show how each of these five uses meets the rules for the use of reinforcement.

Assignment:

1. Continue to record baseline on your behavior project.
2. Develop a proposed course of treatment for your behavior project describing both antecedents and consequences involved. (This will be reviewed at the next session - do not begin treatment until after the next session).
3. Describe what might be the significant antecedents and consequences for each of the following behaviors:
  - a. A student taking a class test suddenly leans across the aisle and reads his neighbor's paper.
  - b. A student walks away from the group in the classroom.
  - c. A student throws a temper tantrum.
  - d. A student begins to work harder and faster.
  - e. A student offers part of his lunch to a fellow student.

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THEORY AND PRACTICE OF LEARNING

Training in Behavior Modification

Session 5: Freeing Students for Better Opportunities

The goal of a good program is learning and the constant companion of learning new skills and good behaviors is positive reinforcement.

Unacceptable and unadaptive behaviors stand in the way of both useful learning and positive reinforcement given for useful learning.

Unacceptable behaviors are learned and maintained because they produced some reinforcing event. In order for unacceptable behavior to be diminished or eliminated, it is desirable for the previously reinforcing event to be reduced or removed.

If this is the only step taken, the undesirable behavior will decrease. This procedure is called extinction. It is one of four major approaches to dealing with unacceptable behavior.

The other three are the positive reinforcement of an incompatible behavior time-out from positive reinforcement and punishment. The first involves the selection of a more desirable behavior which requires action which precludes the behavior of concern from occurring. Positive reinforcement for the new behavior is given for each time the new behavior appears while no reinforcement is given the unacceptable behavior.

In time-out, the immediate consequence of the undesirable behavior is removal from the setting where positive reinforcement is available for a brief period of time.

Punishment is the making of an event which has the effect of reducing the behavior, consequent to the behavior.

Many unusual events may occur when extinction, time-out and punishment are employed. The most significant may be the effect on the relationship of the student to the teacher.

In most cases the order of preference in dealing with undesirable behavior is reinforcing an incompatible behavior, extinction, time-out and then punishment. However, the critical determinants must be the effect of the undesirable behavior on the health and well-being of the student and its effect on his learning and access to positive reinforcement.

Great care must be taken in the use of time-out and punishment that they do not become the most significant conditions of the total environment.

Regional In-Service Training for Adult Activity Centers  
Session 5 (Con't)

Assignment:

1. Continue treatment on your project. Record all data on your graph.
2. Describe a situation among your students wherein reinforcing an incompatible behavior appears to be the most effective way of eliminating an undesirable behavior.
3. Describe a situation among your students wherein extinction appears to be the most effective way of eliminating an undesirable behavior.
4. Describe a situation among your students wherein time-out from positive reinforcement appears to be the most effective way of eliminating an undesirable behavior.
5. Describe a situation among your students wherein punishment appears to be the most effective way of eliminating an undesirable behavior.

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Spring, 1972

THEORY AND PRACTICE OF LEARNING  
Training in Behavior Modification

Session 6: Bringing Learning Into Contact With The Real World

When learning/teaching programs are established, a significant factor is a continuous rate of consequence. That is, every single time the behavior of concern appears, the specified consequences follow.

However, there are many situations where such a rate of consequence is not possible, practical or desirable. Consequences can be applied on other than a continuous schedule to meet certain circumstances.

Four basic types of schedules of consequence can be defined: fixed ratio; fixed interval; variable ratio; and variable interval.

The fixed ratio schedule provides a consequence after a certain number of occurrences of the behavior. The fixed interval schedule presents the consequence upon the first occurrence of the behavior after the passing of a specified period of time.

The variable schedules follow the same format, but provide that the specified number of occurrences or period of time changes after each consequence around a pre-determined average.

The use of each type of schedule on an extended basis tends to give rise to certain patterns of occurrence of the behavior concern.

The use and manipulation of schedules of reinforcement is a critical aspect of developing a learning program so that the behavior change is maintained naturally.

Regional In-Service Training for Adult Activity Centers  
Session 6: Bringing Learning into contact with the Real World - 2

ASSIGNMENT:

1. Continue treatment on your project. Record all data on your graph.
2. Describe an example of fixed ratio consequence in the natural environment preferably from the day center setting.
3. Describe an example of fixed interval consequence in the natural environment preferably from the day center setting.
4. Describe an example of variable ratio consequence in the natural environment preferably from the day center setting.
5. Describe an example of variable interval consequence in the natural environment preferably from the day center setting.
6. Describe how you would manipulate the schedule of consequence in your project so that the change in the behavior of concern will be maintained by the natural environment.

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## THEORY AND PRACTICE OF LEARNING

### Training in Behavior Modification

#### Session 8: Learning the New from the Old

Frequently the training goal for a student or program is not merely to increase or decrease the rate of occurrence of the behavior. Often we are concerned with an entirely new behavior. Since it is a new behavior we seek, it does not presently occur and the probability of it occurring is almost or actually zero. So it becomes impossible to increase it with a reinforcement program.

An effective way of teaching a new behavior is the technique called shaping. In this approach we carefully define both the present behavior and the goal behavior. We then select those behaviors presently occurring which most resemble the goal behavior and reinforce these. When they occur with good frequency, we select the next behavioral approximation to the final goal. Through reinforcing each successive approximation to the goal the behavior is gradually changed.

Some important considerations in a shaping program are: the changes in behavior at each step must be small enough to have a good probability of occurring; reinforcement should be most powerful and frequent for the behavior that most approximates the goal while reinforcement for earlier steps should be thinned or discontinued; when the reinforcement rate declines because of a lower rate of the desired behavior, a return to a previous step may be indicated.

The keys to a successful shaping program are a clearly defined goal; small, goal-directed steps and powerful differential reinforcement.

Another technique of training a new behavior is the manipulation of environmental or stimulus conditions so as to limit the response to the behavioral goal. When this response occurs it is powerfully and regularly reinforced. When it occurs with good frequency and/or accuracy, the environmental or stimulus restriction is slowly decreased or removed.

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Great Oaks Center

THEORY AND PRACTICE OF LEARNING

TRAINING IN BEHAVIOR MODIFICATION

Session 9: Learning by Watching

One of the most effective and efficient ways of teaching new skills, whether they be social, academic or vocational, is through modeling and imitation. This is the way in which all of us have mastered complex skills quickly - without the need for extensive shaping procedures for each skill.

Modeling can be either actual - another person executing the behavior as the student observes it, or it can be symbolic - through the use of pictures, diagrams or words.

In either case, the basic procedure is the same - a presentation of a behavioral performance to the student with the expectation that he will be able to reproduce that performance at some later time.

However, a number of dimensions can be added to greatly improve the effectiveness of this technique.

The first of these is explicitness. If the steps of the behavior are clearly presented with definite relationship to relevant stimulus objects then accurate learning is more likely to occur. This is particularly true where the modeling is done through verbal instruction. The more detailed the description, the more likely the student will be able to reproduce the behavior exactly.

A second dimension lies in student rehearsal. The probability of the student accurately learning the behavior accurately is far greater if he is called upon to reproduce it immediately after the model was presented.

One of the most powerful factors in successful modeling is the attachment of consequences to the behavior. This applies to both the model and the student. If the model's behavior is clearly followed by appropriate consequences, the student is much more likely to respond according to those consequences - imitate if the consequences are reinforcing, avoid if they are punishing. It is equally important to attach those consequences to the student's imitation of the behavior.

A final aspect of enhancing the use of modeling is in the choice of the model. For most learning programs the model should be an admired person or type of person (or in the case of symbolic models, come from a respected source). Thus an adult leader is frequently the most effective. Where student behavior is involved, a well-liked peer is a good choice. Where the goal is unlearning or avoidance of a behavior, a close similarity between the model and the student will enhance the effect of the modeling program.

Regional In-Service Training for Adult Activity Centers -  
Session 8: Learning the New from the Old.

ASSIGNMENT:

1. Continue your behavior-change project.
2. Develop a shaping program to produce a verbal response from a presently nonverbal student. Describe the steps you might expect to observe and reinforce.
3. Develop a fading program to train a student in the use of a spoon for a student who presently eats only with his fingers.
4. A student constantly scratches his head. How would you deal with this through a shaping program?
5. You want to teach a student to hammer a nail in the center of a circle. Describe a shaping and a fading program to achieve this.

Assignment:

1. Prepare a complete final report on your behavior change project. This should include: description of the behavior of concern; description of the goal behavior; measurement technique used; description of treatment program including any antecedents used as cues, contingency conditions, reinforcer(s) used, schedules used, discrimination or generalization components added; description of reversal procedure and contingencies if used; a complete graph showing all data. Please make two copies as I do not expect to return the copy given to me. Also please present your report in a finished form if possible, so that additional copies may be made by photocopying for the information of others. Give your project a title. This title, your name and your center should appear at the top of the first page.
  
2. Develop a brief outline of a modeling program to train a work (or other) skill in your program.

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## THEORY AND PRACTICE OF LEARNING

### Training in Behavior Modification

#### Session 7; Bridging the gap and telling the difference

When a behavior is consequted so as to increase or decrease its frequency, that change may occur in other situations also or it may remain associated exclusively with the particular circumstances of the consequence. The alternative which occurs may be undesirable for that behavior change - or we may wish for it to occur even more strongly or rapidly.

It may be desirable for the change to occur only under a very specific set of stimulus conditions, i.e. in the library; on Saturday mornings; when wearing a suede jacket; when at the work table; etc. On the other hand, it may be important for it to occur under all circumstances or a large class of stimulus conditions such as : at all meals; in all buildings; to all notices; to all animals; etc.

In the first case, responding to a given set of conditions, we speak of stimulus discrimination. The second we designate as stimulus generalization. In either case we are concerned with the occurrence of a behavior being controlled so to speak by the stimulus conditions in each situation.

In developing a generalization of a behavior to other settings, consequence must occur for appearances of the behavior to all instances of these settings. To develop generalization, small changes in the stimulus condition must be presented with the consequence following each response to them.

To achieve discrimination, no - or different consequence must follow all responses to stimulus conditions different to the one established as desirable. Discrimination training is accomplished best by introducing a set of stimuli very different from the original set and then making them increasingly similar while maintaining differential reinforcement.

#### Assignment:

1. Continue your project. Begin a reversal procedure if your data has shown significant change in the desired direction.
2. Describe a behavior which is one of your program goals for which a stimulus discrimination training program is indicated. Describe the details of a way to set up this discrimination training program.
3. Describe a behavior which is one of your program goals for which a generalization training program is indicated. Describe the details of such a program.

# REGIONAL IN-SERVICE TRAINING FOR ADULT ACTIVITY CENTERS

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Great Oaks Center

## THEORY AND PRACTICE OF LEARNING

### Training in Behavior Modification

#### Session 10: Creating a powerful learning environment

We have seen how the environment affects behavior. We have also studied ways in which the environment can be changed to increase, decrease, change, expand and define behavior. In all these discussions, the focus has been on the individual student and the analysis and change of selected behaviors.

It is often the case, however, that the collective behavior of a group is of pressing concern. We can then consider the application of a group contingency program. Here we apply all the previously defined principles to a group situation. The behavioral goal for the group is defined, intermediate steps are determined if necessary, one or more reinforcers known to be generally powerful for the members of the group are established, the reinforcers are made contingent upon the behavioral performance of the group. Again the rules for reinforcement apply - immediate, frequent, consistent, fair, clear and specific.

Some of the unique dimensions of group contingencies are the difficulty in determining what is in fact an achievable next step for them and the identification of a universally powerful reinforcer. However, the issue of the reinforcer is frequently more easily involved than one might expect. Though a certain activity may not appear equally to all members of the groups, an additional component of consequence has been added through the reinforcement and punishment from the group to the individual member for performance or non-performance. Thus it is also easy to see how group contingencies may be used to more powerfully affect the deficient behavior of one or several members of a larger group.

An all encompassing application of these principles in a very positive framework is seen in the operation of a token economy where tokens are given as positive reinforcers to all demonstrations of desirable behaviors exhibited by all members of the group.

Though we cannot describe all the aspects of a token economy here, a careful application of all the areas previously discussed will be useful in understanding the operation of such a program.

It is particularly important that each student quickly learn that the token he earns for emitting a desirable behavior such as a social skill, an academic performance or a work sample is both accompanied by generous social reinforcement and has the power to purchase an item of interest to him. The former is important so that, where appropriate, token reinforcers may be faded out. The latter is essential so that

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the token will be a true reinforcer - that is, its availability will cause the behavior to increase in frequency. Thus, it is crucial that a carefully selected wide variety of opportunities be offered for expenditure of the tokens.

It is further essential that the staff in a token economy continuously define the specific behaviors for which tokens will be given. There must be frequent evaluation of behavior change. Behavioral goals should be defined and reviewed for each individual in the program. Though this may appear to be more demanding for a staff it is also much more reinforcing. It is more gratifying to work for specific goals and see them attained. It is most satisfying to work in an environment where positive reinforcement is so abundant - for students and staff alike.

Assignment:

1. Apply what you have learned. Learn from what you try.
2. Fill your teaching experience with positive reinforcement for all the right things - for your students, your colleagues, yourselves.
3. Keep in touch - particularly if you need help or have a question - but also just to continue sharing what we began together.

Thank you for making this both a good learning and positively reinforcing experience for me.

Rolf H. Mielzarek

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6100 South Gate Drive  
Temple Hills, Maryland 20031  
Phone: 894-4410

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Berwyn Heights, Maryland  
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SECTION 3.1.0

Behavior Modification taught  
to teachers in training.

### Section 3.1.0

#### Behavior Modification Taught to Teachers in Training

From the experiences of the School Psychology Personnel of working with the teachers in the field it became apparent that much more could be gained if the students in training to be teachers at the University in the College of Education could be taught the principles of behavior modification while they were still in college. It was apparent from early work that the teachers in the field exhibited a wide variety of attitudes, misperceptions and knowledge about the behavioral approach. Thus, in work with teachers, time was wasted as these attitudes and misperceptions had to be discussed and changed before the teaching could continue; in some cases this was repetitious to some of the teachers who were more sophisticated about behavior modification. It became obvious that if each student teacher was given a background in behavior modification, while the student was still in college, the teachers would then later be more likely to be at the same level when they entered the field. It also seemed logical that the appropriate place for the student teacher to learn about new knowledge in the field of teaching should be in college of education where there her training was received. It is also obvious that it is more efficient to teach the behavioral principles while the individual is in college than when she is teaching in the field, if, for no other reason, than the amount of time available. This idea is not unique with the Maryland School Psychology Program. O'Leary and O'Leary in their recent book entitled Classroom Management: The Successful Use of Behavior Modification, state "... the principles of behavior modification should be included in all undergraduate education curricula (p. 41)". Those in the

School Psychology Program heartily concur.

### 3.2. WORK DONE IN THE PAST

3.2.1 During the spring of 1971 the Associate Dean, responsible for the undergraduate teacher education, arranged for a meeting of the School Psychology personnel and the supervisors of the student teachers in the field. At that meeting a brief overview of behavior modification and its application to the classroom was presented. From that meeting and a subsequent one with members of the faculty from the Department of Early Childhood-Elementary Education, a decision was reached for members of the School Psychology Program to meet with the student teachers for a presentation of the principles of behavior modification.

3.2.2 In the spring of 1972 School Psychology personnel met with the student teachers. There were seven different presentations in the various schools where student teachers were being trained. A report on these presentations is included at the end of this section.

### 3.3. WORK CURRENTLY UNDERWAY IN THE FALL 1972

3.3.1 A copy of the report on the presentations to student teachers has been forwarded to the Department of Early Childhood-Elementary Education. With a recommendation to include behavior modification in the curricula of that department was presented. A decision about the next steps to be taken is currently before a committee in that department.

### 3.4 FUTURE PLANS

3.4.1 It is hoped that in the future provisions will be made for the

teaching of behavior modification principles to the student teachers during their training. It seems most important that in this period of surplus teachers in particular areas that each teacher should have all of the knowledge and skills that are available for her to do that best job possible. It would seem most feasible and economical for the teaching of the student teachers to be personnel from the School Psychology Program.

### Section 3.1.0

#### Behavior Modification Taught to Teachers in Training

From the experiences of the School Psychology Personnel of working with the teachers in the field it became apparent that much more could be gained if the students in training to be teachers at the University in the College of Education could be taught the principles of behavior modification while they were still in college. It was apparent from early work that the teachers in the field exhibited a wide variety of attitudes, misperceptions and knowledge about the behavioral approach. Thus, in work with teachers, time was wasted as these attitudes and misperceptions had to be discussed and changed before the teaching could continue; in some cases this was repetitious to some of the teachers who were more sophisticated about behavior modification. It became obvious that if each student teacher was given a background in behavior modification, while the student was still in college, the teachers would then later be more likely to be at the same level when they entered the field. It also seemed logical that the appropriate place for the student teacher to learn about new knowledge in the field of teaching should be in college of education where there her training was received. It is also obvious that it is more efficient to teach the behavioral principles while the individual is in college than when she is teaching in the field, if, for no other reason, than the amount of time available. This idea is not unique with the Maryland School Psychology Program. O'Leary and O'Leary in their recent book entitled Classroom Management: The Successful Use of Behavior Modification, state "... the principles of behavior modification should be included in all undergraduate education curricula (p. 41)". Those in the

School Psychology Program heartily concur.

### 3.2. WORK DONE IN THE PAST

3.2.1 During the spring of 1971 the Associate Dean, responsible for the undergraduate teacher education, arranged for a meeting of the School Psychology personnel and the supervisors of the student teachers in the field. At that meeting a brief overview of behavior modification and its application to the classroom was presented. From that meeting and a subsequent one with members of the faculty from the Department of Early Childhood-Elementary Education, a decision was reached for members of the School Psychology Program to meet with the student teachers for a presentation of the principles of behavior modification.

3.2.2 In the spring of 1972 School Psychology personnel met with the student teachers. There were seven different presentations in the various schools where student teachers were being trained. A report on these presentations is included at the end of this section.

### 3.3. WORK CURRENTLY UNDERWAY IN THE FALL 1972

3.3.1 A copy of the report on the presentations to student teachers has been forwarded to the Department of Early Childhood-Elementary Education. With a recommendation to include behavior modification in the curricula of that department was presented. A decision about the next steps to be taken is currently before a committee in that department.

### 3.4 FUTURE PLANS

3.4.1 It is hoped that in the future provisions will be made for the

teaching of behavior modification principles to the student teachers during their training. It seems most important that in this period of surplus teachers in particular areas that each teacher should have all of the knowledge and skills that are available for her to do that best job possible. It would seem most feasible and economical for the teaching of the student teachers to be personnel from the School Psychology Program.

APPENDIX FOR SECTION 3.1.0

Behavior Modification  
taught to teachers in training.

3.5.1 Report on the Behavior Modification  
Presentation for Student Teachers.

## Report on the Behavior Modification Presentation for the Student Teachers

Donald K. Pumroy

### Introduction

During the Spring of 1971 Dr. Pumroy met with the coordinators of the University Teaching Center, Dean McClure, and Dr. Marx, and presented some of the principles of Behavior Modification. From this, meeting sufficient interest was aroused so that in the Fall of 1971 three Behavior Modification courses were offered at the Teaching Centers (Northfield Elementary, Whittier Woods Elementary, and Forest Knolls Elementary). These were taught primarily by two students in the School Psychology Program (Judith Mazza and Nelson Zahler) and Dr. Pumroy. As these courses were so well received it seemed most appropriate that our University of Maryland student teachers have the knowledge of Behavior Modification before they begin their teaching or at least as soon as possible after their student teaching has begun. This seemed to be particularly important as there cease to be a shortage of teachers and, as competition for jobs becomes greater, Maryland students will possess knowledge and skills not obtained by others and consequently be more hireable. In order to effect a beginning in this direction Dr. Pumroy sent a letter to Dr. Weaver stating that he and his students would be available to make a presentation on Behavior Modification to the student teachers and suggested various ways this might be done. Dr. Weaver referred the letter to a committee chaired by Dr. Eley. Nelson Zahler and Dr. Pumroy met with the committee. From this meeting it was decided that Dr. Pumroy and his students would make a presentation at the various centers.

### Presentation

During the week of March 20 and two days of the following week (March 27 and 28) Dr. Pumroy and students from the School Psychology Program made presentations on Behavior Modification and Classroom Management at seven different centers. Two hundred seventy one individuals attended the presentations; almost all of those attending were student teachers although there were some regular teachers, principals, counselors etc. as well. The format of the presentation was essentially the same. A film, "Behavior Modification in the Classroom" from the University of California, Berkeley, was shown followed by questions from the students about Behavior Modification. At the end of each presentation a questionnaire (see attached) on Behavior Modification was given to the group to be completed. A hand out (see attached) on Behavior Modification was also given to those that attended.

### Results of the Questionnaire:

Because of the growing popularity of Behavior Modification it was anticipated that many of those attending has had some exposure to the subject. Thus, only 19 said that they had had no experience with Behavior Modification

(over)

|            |                                             |
|------------|---------------------------------------------|
| <u>19</u>  | None at all                                 |
| <u>140</u> | Talked to others informally about it        |
| <u>150</u> | It has been mentioned in class              |
| <u>121</u> | Have lectures or presentations on it        |
| <u>70</u>  | Have seen a movie                           |
| <u>124</u> | Have read articles                          |
| <u>45</u>  | Have read book(s)                           |
| <u>112</u> | Have applied it in my dealing with children |
| <u>28</u>  | Other                                       |

Table 1. Responses to experiences with Behavior Modification (Note that one person could check more than one category)

It appears that the student teacher had had a wide exposure to Behavior Modification. It, of course, is not possible to judge the depth of the knowledge that they received from the data in Table 1. Perhaps that can best be inferred from some of the questions they raised and their desire to learn more, which could be interpreted as a realization of the limitation of their knowledge. The questions that they raised during the discussions and the comments on their questionnaires indicate that some of the student teachers were fairly naive. Questions referring to "bribes," feeling that the "child is being tricked," a view that only candy is used with Behavior Modification, would all be consistent with a lack of knowledge about Behavior Modification. Probably more telling is the overwhelming desire to learn more about Behavior Modification as reflected by the overwhelming positive responses to the question asking if the student teachers were interested in learning more about Behavior Modification. (The number of responses were: Yes 250, No 8, Other 3). Stated another way 96% of those attending were desirous of learning more about Behavior Modification.

#### The Future.

As it seems important for our student teachers to be skilled in new relevant techniques and in an area strongly desired by them, one might ask what is the most efficient way for that new knowledge to be imparted. Perhaps, in these days of tight money, it would also be wise to ask how the teaching can be done for the least money. One procedure which is relatively inexpensive and efficient would be to have a course in Behavior Modification taught by graduate assistants from the School Psychology Program. These students have had the scientific background to be knowledgeable of the material and also have had training and experience in imparting this knowledge to teachers. Not only would the student teachers learn the material, and the graduate assistants receive financial support, but it would also be valuable training for the graduate student. It also might help to promote more interactions between faculty from different departments, something that many on the faculty feel is important. Dr. Rumroy would assume responsibility for developing and staffing the course. Perhaps this procedure would be good to try for a few years. Later maybe a full time faculty person could best serve this function.

The questions that now should be resolved would be: Is it desirable to teach our student teachers Behavior Modification? How can it best be taught? Who should be responsible for its teaching? How can it be financially supported?

SECTION 4.1.0

Evaluation of Behavior  
Modification Programs.

#### Section 4.1.0

##### Evaluation of Behavior Modification Programs

It should be obvious that those in the School Psychology Program believe that teachers should have the knowledge and skills associated with behavior modification principles. This belief, however, is not something to be taken for granted, but serves as a guideline for the collection of data that supports it. Stated another way, the School Psychology personnel believe that research should be conducted to determine the impact of this knowledge on the way teachers teach. Unfortunately, there appears in the past to have been quite a gap between research and what takes place in the classroom. Cyphert, in his article entitled "An analysis of research in teacher education" (Journal of Teacher Education, 1972, XXII, #2, 145-151) states that "research in teacher education has had a very limited impact on the education of teachers (p. 146)". Perhaps behavior modification and the clarity of its terms will promote a closer relationship among research efforts, classroom activity and the behavior of the students. The School Psychology personnel believe such to be the case.

##### 4.1.1 WORK DONE IN THE PAST

4.1.2 Following each of the behavior modification courses given as questionnaire has been distributed to evaluate the course. Using a questionnaire for such a purpose is fairly traditional and certainly has the disadvantages inherent in any self report questionnaire. It does provide for the easy collection of data and it also has high face validity. A copy of the questionnaire used to evaluate the behavior modification courses is provided at the end of this section.

4.1.2. Another way to assess the program is to administer a prepost test to determine the technical knowledge learned during the course. Such a prepost questionnaire was developed on identification of terms. A copy is included at the end of this section.

4.1.3 A third way in which training effectiveness of evaluation is through a behavior change study. This consists of the student in the course applying the behavioral principles to change the behavior of a child. The results of a sample of behavior change studies is included in the appendix at the end of section 2. The report usually consists of a statement of the behavioral problem, a description of the subject, how the data were recorded, baseline treatment and treatment outcome. From reports collected by personnel of the School Psychology program, almost all of the teachers enrolled in courses, which requires the completion of a behavior change study, experience success.

#### 4.2.0 WORK CURRENTLY UNDERWAY IN FALL 1972

4.2.1 Since February, 1972, the School Psychology Program has been involved in a project sponsored by the State Department of Education in which evaluation of what has come to be called the "multiplier" effect is taking place. The multiplier effect specifically entails training representative school personnel from four counties on the Eastern Shore in a fifteen week course in the application of behavior modification principles to classroom management. These representatives or "multipliers" are to return to their counties to disseminate this knowledge. The "multipliers" are being supported through consultative services and their

effectiveness of teaching teachers behavior modification evaluated (see section 2.4.2). Each multiplier is assigned to work with one teacher. The teachers wanting behavior modification training were divided into experimental and control groups. The control group received no consultative support services. The experimental group receives consultation and assistance from the "multipliers" who, in turn, receive continued supervision in helping teachers adopt a behavioral orientation, pinpointing problem children in class, observing and recording behavior, developing behavioral remediation programs, and generally imparting the principles and techniques learned in their fifteen week course.

Undergraduate students from the University of Maryland have been trained in observational procedures to serve as independent raters of classroom activity for each pair of groups. The observers will rate on-task, off-task behavior of students in the classroom as defined by the activity the students were supposed to be engaged in. In addition, the amount of time the teachers spend on curriculum instruction vs. discipline is recorded. Rating of the differential frequency of positive and negative comments of the teachers while teaching and interacting with student will be recorded via cassette tape recorder and judged by independent judges.

This evaluation procedure is innovative in that the focus and thrust of data collection will reflect changes in the behavior of the teachers and students, rather than merely the verbal behavior or in-class performance of the teacher on a pre-test, posttest. Furthermore, it will reflect how effectively teachers can impart behavioral knowledge to other teachers. In this way, behavior modification knowledge may be able to be disseminated

more widely to increasing numbers of teachers.

#### 4.3. FUTURE PLANS

4.3.1 A symposium has been submitted to the National Association of School Psychologists for their consideration for the spring meeting.

The symposium concerns evaluation of behavior modification programs. The conclusions from the symposium should be of value to school psychologists which should in turn, benefit teachers.

APPENDIX FOR SECTION 4.1.0

Evaluation of Behavior Modification Problems

4.4.1 A.S.P.P. Evaluation Questionnaire

4.4.2 Graph of A.S.P.P. Pre-Test  
Post-Test Results

4.4.3 Behavior Modification Questionnaire

OPTIMAL  
EVALUATION FORM

1. In general how does this course compare to other university or hospital continuing education offerings offered here?

2. In what ways could this course be improved?

3. What is/are the thing/s you liked most about this course?

4. What objectives did you have in taking this course?

grade credit \_\_\_\_\_ certification credit \_\_\_\_\_  
source content \_\_\_\_\_ other \_\_\_\_\_ certificate \_\_\_\_\_

COMMENTS:

5. If your reason was more than credit did you achieve your objective?  
(see question 4)

6. Rate the following on a 1-5 scale. 1=very good 5=very poor or no value  
or useful

|                            |           |
|----------------------------|-----------|
| a. textbook                | 1 2 3 4 5 |
| b. interviews              | 1 2 3 4 5 |
| c. lectures                | 1 2 3 4 5 |
| d. movies                  | 1 2 3 4 5 |
| e. fill in blank exercises | 1 2 3 4 5 |
| f. case study exercises    | 1 2 3 4 5 |
| g. your behavior project   | 1 2 3 4 5 |
| h. discussion groups       | 1 2 3 4 5 |
| i. session agenda          | 1 2 3 4 5 |

COMMENTS:

FILMED FROM BEST AVAILABLE COPY

1. The first part of the report, covering the period from 1945 to 1947, is devoted to a description of the situation in the country at the end of the war.

2. The second part of the report, covering the period from 1947 to 1949, is devoted to a description of the situation in the country during the period of the civil war.

3. The third part of the report, covering the period from 1949 to 1951, is devoted to a description of the situation in the country during the period of the civil war.

4. The fourth part of the report, covering the period from 1951 to 1953, is devoted to a description of the situation in the country during the period of the civil war.

5. The fifth part of the report, covering the period from 1953 to 1955, is devoted to a description of the situation in the country during the period of the civil war.

6. The sixth part of the report, covering the period from 1955 to 1957, is devoted to a description of the situation in the country during the period of the civil war.

7. The seventh part of the report, covering the period from 1957 to 1959, is devoted to a description of the situation in the country during the period of the civil war.

8. The eighth part of the report, covering the period from 1959 to 1961, is devoted to a description of the situation in the country during the period of the civil war.

9. The ninth part of the report, covering the period from 1961 to 1963, is devoted to a description of the situation in the country during the period of the civil war.



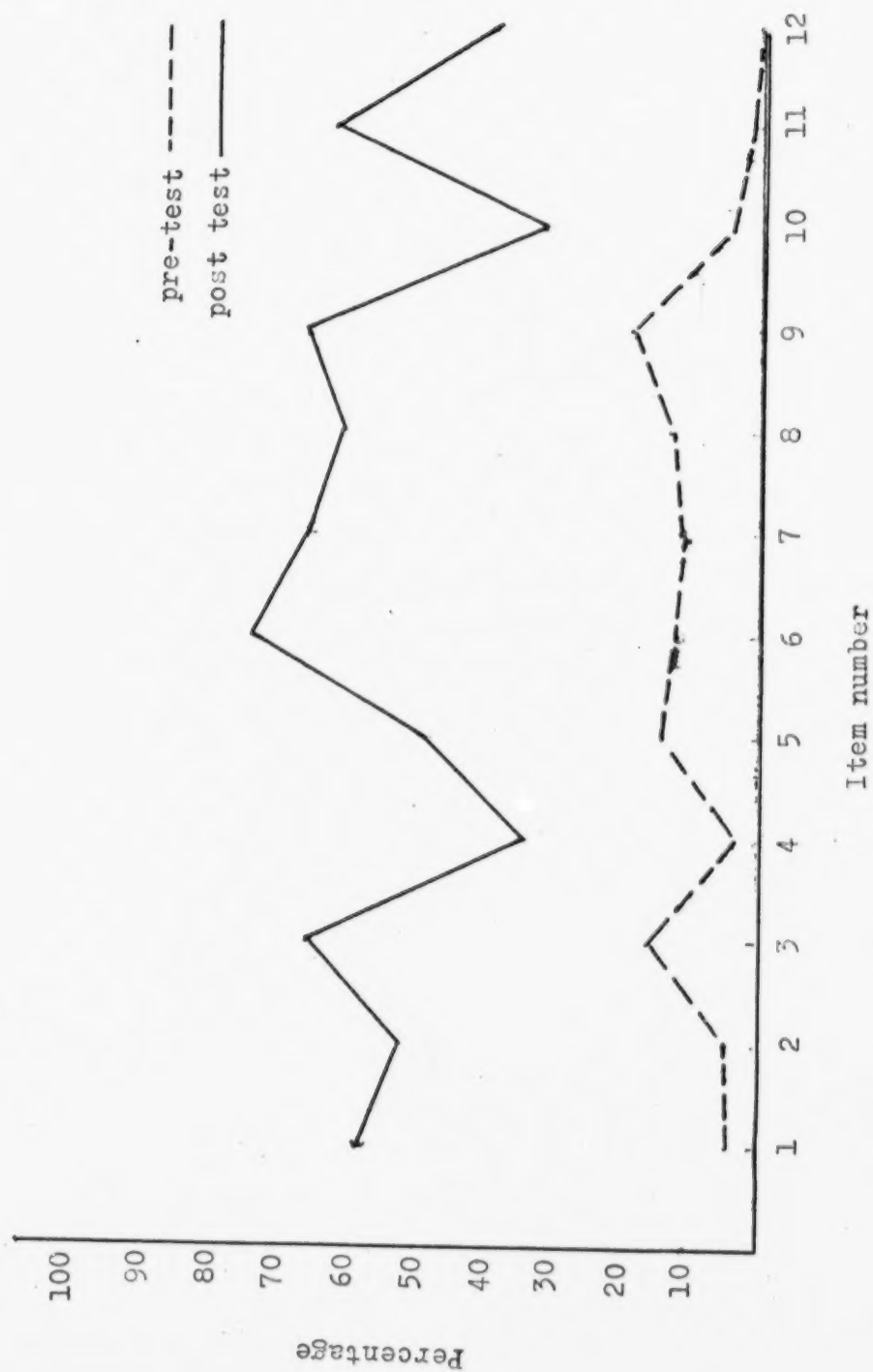


Figure I. The percentage of teachers who passed each item on the pre- and post test.

## OFFICIAL QUESTIONNAIRE

Date \_\_\_\_\_

Location of talk \_\_\_\_\_ Age \_\_\_\_\_ Sex \_\_\_\_\_

Children yes \_\_\_\_\_, no \_\_\_\_\_

Age and sex of children

|    |       |       |
|----|-------|-------|
| 1. | _____ | _____ |
| 2. | _____ | _____ |
| 3. | _____ | _____ |
| 4. | _____ | _____ |

This is a: FTA \_\_\_\_\_

OTHER \_\_\_\_\_

I am a teacher \_\_\_\_\_  
 parent \_\_\_\_\_  
 other \_\_\_\_\_

As you may know there is a relatively new way of working with children called behavior modification. We are interested in how much exposure you have had to this approach and your reaction to it. Would you please complete the rest of the form:

1. My experience with behavior modification has been: (check appropriate items).

☐ none at all  
☐ talked to others informally about it  
☐ been mentioned in class  
☐ have heard lectures or presentations  
☐ have seen a movie  
☐ have read article(s)  
☐ have read book(s)  
☐ have applied it in my dealing with children  
☐ other (please specify) \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

2. My reaction to the behavior modification approach is:

☐ very negative  
☐ negative  
☐ neutral  
☐ positive  
☐ very positive  
☐ do not know enough to judge

3. General Comments: